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ORIGINAL ARTICLES.

A CONTRIBUTION TO HEPATO-PHLEBOTOMY.

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My experience in abdominal surgery has occasionally brought to my notice cases in which the existence of a tumor was suspected because of the general enlargement of the abdomen, which, however, upon examination has proved to be due to tympany, or ascites, depending frequently for its cause upon diseases of liver or mesentery.

The ascitic cases have always proved more or less disappointing and unsatisfactory subjects for treatment, and it is with a desire to make some small contribution to an exacter knowledge and possibly better therapy of this difficult subject that I have written the following, describing two of my cases which are most valuable suggestively.

The first stands as a type of many others, in which the sole effective treatment consists in a series of tapplings more or less frequent. In the second I have detailed my effort to deal more directly with the disease by a short incision—abdominal section—rapid and thorough evacuation, careful inspection, with the end in view of abstracting blood directly from a diseased liver.

CASE I.—J. N., ropemaker, aged thirty-nine, of good habits, with the exception of inordinate tobacco-chewing. He has long been a chronic dyspeptic, but otherwise in good health, until his abdomen began to enlarge. The swelling continued until his girth was fifty-two inches, and he weighed two hundred and twenty pounds in August, 1884, when he came to me for treatment. He then complained most of frequent belching, constipation, discomfort from the extreme distention, and orthopnoea. The skin was muddy, and the conjunctivæ slightly yellow. I drew four bucketfuls of fluid from his abdomen, when a violent cough set in and stopped the tapping. He was tapped a second time in nine weeks, and once more after several months; the last time through a capillary tube, which emptied the peritoneal sac completely, drop by drop, in thirty hours, without any discomfort to the patient. He weighed after tapping one hundred and sixty pounds.

Medical treatment did not at any time affect his condition. He took large doses of ammonium chloride, iodide of potash in large and small doses, arsenic, diuretics, diaphoretics, and purgatives, and mineral waters.

After tapping, a greatly enlarged liver could be felt almost filling the right side of the abdomen. The free border and smooth convexity were readily palpable following a greater curve concentric with the smaller normal curve.

The diagnosis made was enlargement of the liver due to interstitial hepatitis. He still lives, but is no longer under my care. The futility of my efforts here led me to adopt a bolder plan in the next case, cited below.

I had long since convinced myself that the simple exploratory incision into the peritoneum was absolutely free from danger, when surrounded by those precautions which every prudent surgeon now understands. Observation had also shown me that when supposed abscesses were hunted for by plunging a large size aspirating trocar into the liver no bad results ever followed the injury. The largest trocar I had seen thus used was two and a half millimetres in diameter.

Combining these two factors of experience the suggestion was a natural one, that it would be safe to open the abdomen in a case of disease of the liver due to chronic congestion or an acute enlargement, and draw off a considerable amount of blood, and in cases of coexisting ascites to secure at the same time a thorough evacuation of the fluid, even to dryness. Indeed, the dangers of such a procedure, properly performed, are, I am sure, less than those of tapping in the hands of many, to whom it is merely a matter of plunging an unprepared trocar into the abdomen at any seemingly convenient point, and after an evacuation, covering the hole with a bit of sticking plaster. My determination was, in the next case similar to the one detailed, to make a short but fair trial of the usual resources, and then, in event of failure, to open the peritoneum promptly, thoroughly evacuate the fluid, examine the liver by touch and inspection, and in case of congestion, or any acute enlargement, to plunge a suitable trocar into its substance, and draw off a sufficient amount of blood.

In the meantime Dr. George Harley delivered an admirable address upon this subject before the British Medical Association at Brighton last summer. I had the satisfaction of hearing this paper read, and thus felt more assured in my first attempt in having with me the weight of so eminent an authority. Dr. Harley's method was different from my own, but the result aimed at was the same. This will be discussed later.

CASE II.—J. D., aged forty-three, had been a gin-drinker, although he stoutly denied it, all his life. He stated that he had always been well until a recent fall from a dummy-car, when the abdomen began to swell, and it had continued to enlarge until he measured thirty-nine inches in the girth, when I saw him. His frame was much emaciated, the eyes slightly jaundiced, and his belly greatly distended. He had had a fair trial of appropriate medical treatment at the Episcopal Hospital, without benefit; I also tried the usual remedies without helping him. On

the twenty-ninth of October, 1886, Dr. T. B. Bradford etherized him, and, assisted by Dr. W. J. Freeman, Dr. R. P. Harris being present, I made a small incision through the thin abdominal walls in the linea alba. The fluid welled out, and by elevating the shoulders and hips, and at the same time rolling him on his side, a perfect evacuation of the fluid contents was secured.

I was then able to catch the liver between two fingers, and with the assistance of a little pressure from without, it was brought fully into view at the incision.

It was pale, hob-nailed, and contracted, and as no possible benefit could reasonably have been expected from puncture and an attempt at bloodletting—if, indeed, any blood would flow from such a gristly structure—the incision was closed. It healed quickly, the patient died forty-seven days after the exploration, in the natural course of his disease.

Thus by a simple operation which may be described, so long as it is confined to a small incision quickly closed, as a modification of the puncture method, I secured a quick, complete evacuation of fluid, and had the liver in my fingers and under my eyes, determining the exact nature, and the exact extent of the morbid process.

The nature of the disease in this particular instance could have been as readily determined after an ordinary tapping, but I was acting under the conviction that the safety of my incision was equally great, and I determined at once the *extent* of the disease, although my *expectation* had been of finding the liver enlarged.

The further procedure would then have been to plunge a trocar three millimetres in diameter into the liver substance, guided by eyes and fingers to the elected point, avoiding gall-bladder, intestines, greater bloodvessels, or the possible simple transfixion of a lobe, and through this draw off a sufficient quantity of blood.

It is for this procedure, which Dr. Harley calls hepato-phlebotomy, that I ask a fair trial, insisting that a diagnostic incision of this sort, with the attendant advantages of inspection and immediate palpation, is far preferable to weeks and even months of protracted treatment in obscure cases. I would especially urge it in ascitic cases where some operation is necessary to remove the fluid.

Dr. Harley's method is different from my own, as he taps the liver (from without) through skin, fasciæ, muscles, and peritoneal reflections; he also extends the indication to include puncture of the tense capsule in chronic hepatitis, mostly malarial. He has found in these latter cases that, just as puncture of the tunica of a swelled testis, or of the sheath of an inflamed sciatic nerve gives relief, so multiple punctures of the painful liver in these cases are valuable. He has made as many as six punctures in one case, using a trocar eight inches long, which enters from right to left up to its hilt; it is then a little withdrawn allowing a channel for the accumulation of the blood, which now flows readily into the aspirator. He justified his procedure by the statement that cupping, leeching, or any abstraction of blood from the hypochondrium has no more effect than

so much general depletion; he has also observed for thirty years past that, owing to the elasticity of the liver, no extravasation of blood follows simple puncture of the liver. Thus he was led to adopt the plan he so ably advocated at the Congress.

Out of several cases reported all were relieved, and the first was cured. A lady who had an enlarged liver and anasarca following an attack of acute hepatitis a month before, was tapped in the manner described, and twenty ounces of blood withdrawn. Remedies before inefficient now acted, and after two and a half months the patient was out walking, and at a later date the dulness in the nipple line measured but four and a half inches.

My own method possesses the following distinct advantages over that advocated by Dr. Harley:

In the first place, where ascites coexists, a simultaneous complete evacuation of the fluid is made through the incision. This cannot be secured by tapping high up in the hypochondrium.

Again, diagnosis, often uncertain as to the exact nature of the disease, and always conjectural as to its extent, is made precise by touch and inspection. Implication of neighboring organs is also detected at the same time.

Thirdly, in those cases in which there is a prospect of relief from tapping the liver for blood, the procedure is conducted with a degree of safety and certainty otherwise unattainable. Under full direction of eyes, and fingers grasping the organ, the trocar is guided to the elected spot and the blood withdrawn.

Fourthly, any tendency to ooze after withdrawal of the catheter is at once noticed and checked, either by catching up the lips of the puncture in a suture, or plugging the opening with strands of gut. The amount of blood drawn will vary with the plethoric condition of either patient or liver, and where sufficient is withdrawn to make a decided impression, persistent oozing will hardly occur.

Lastly, all those cases which Dr. Harley has shown may be best treated by multiple puncture to relieve a compressed organ, will, without doubt, be better treated by free incisions through the capsule. In puncturing from without it is impossible to say that the trocar has pierced the capsule and gone no deeper, while under control of eyes and fingers free slits may be safely made, extending several inches on the surface, and numerous enough to be *seen* to produce the desired effect.

The points of election for the incision in the abdominal wall are the right hypochondrium, parallel to the lower border of the liver, or the median line above the umbilicus. Thin walls are readily closed by one set of sutures including everything from skin to peritoneum. Fat walls are best closed by including the peritoneum and subperitoneal fat in a separate series of buried gut sutures.

I am aware, in closing, that there is much obscurity in the diagnosis and pathology of diseases of this class, that while we might rationally hope for relief by free depletion in cases of chronic congestion, in enlargement due to cirrhotic process the chances are against the possibility of arrest even by free depletion. Clinically, however, distinctions are not so

clearly made, and even in hypertrophic cirrhosis, in the absence of an exacter knowledge of the true essence of the disease, its primary cause and *modus operandi*, we cannot predict what result might follow a method calculated to produce a local impression so powerful as this. Dr. Harley's successful case, with the favorable results reported in the other instances, gives us good ground for hope and warrants a further trial.

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AN EXPERIMENTAL STUDY OF THE EFFECTS OF PUNCTURE OF THE HEART IN CASES OF CHLOROFORM NARCOSIS.¹

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THERE has been, already, considerable written on cardicentesis, although the operation was originally proposed and performed in 1882, by Dr. B. F. Westbrook, of Brooklyn, N. Y. Prior to this date several unintentional punctures of the heart had been made without being followed by any unfavorable results.

Dr. John B. Roberts reported two cases of this kind at the College of Physicians of Philadelphia, January 23, 1883.² He likewise called attention to the fact that "Cloquet,³ Bouchut, Legros, and Onimus have also observed the apparent innocuousness of wound of the heart made with capillary trocars. Steiner found, ten years or more ago, that electro-puncture needles could be quite safely introduced into either ventricle, provided they were at once withdrawn." Dr. F. M. Corwin reports in detail a case in which a puncture was made in the right ventricle, about one inch from its apex, without giving rise to any unfavorable symptoms.⁴ Dr. C. L. Dana has reported two cases⁵ in which punctures of the right ventricle were made with negative results. The reports in both these cases are so meagre as greatly to diminish the value which they would otherwise possess; but the comments on cardicentesis are unquestionably highly valuable.

Having referred briefly to the literature of cardicentesis, which possesses an important bearing on our inquiry, although we believe this operation has never been performed on the human subject for the relief of chloroform narcosis, we will now briefly state the observation which prompted us to make these experiments.

While working in my laboratory with my assistant on the evening of February 20, 1887, I killed with chloroform a bulldog which weighed forty-one pounds; and about four minutes after the cessation of respiration, made an incision from the base of the neck, in the median line, to the symphysis pubis. This incision was promptly carried completely through the walls of the thorax and abdomen, thus exposing the heart, lungs, intestines, etc. The heart

was observed to be entirely motionless and in full diastole, while the lungs were completely collapsed and lying in the posterior portion of the thoracic cavity, in close proximity to the vertebral column. My assistant, at this moment, seized the heart between his thumb and fingers, when the cardiac action was immediately resumed, and the hand was promptly removed. The contractions promptly became full and regular, and during the first two minutes the pulsations were about sixty per minute, while during the succeeding minute they became irregular, and stopped at the end of this period, but only to be stimulated into action by the second touch—action continuing two minutes—and was the third time started up in the same manner, but this time continued to beat only one-half minute, and could not again be roused into action. The lungs, during this whole period, remained completely motionless, and there were no other indications of life.

These observations suggested to me the possibility of arousing the heart into action, even after the entire cessation of its movements, by the introduction of a needle into this organ. The record of our experiments, which will appear at length in the *Transactions of the American Surgical Association*, shows the result of our labors.

Having completed sixty experiments on dogs, forty of which were on animals suffering from complicating traumatic injuries, while twenty were perfectly healthy and entirely uninjured, we will present briefly some of the results, and our conclusions drawn from this experimental study, with such explanations as will aid the reader in more fully comprehending these reports. There will be found incorporated in my report of these experiments the post-mortem description of the gross lesions; and in all cases where this has been omitted, it has been because the examinations were entirely negative.

In the post-mortem examinations of the forty cases where we had a right to expect traumatic complications, they have been observed and described in fourteen cases. In the other twenty-six cases these examinations did not reveal any gross lesions. Commercial chloroform was employed in all our experiments. In the first fifty cases, which have been reported in the order in which they were performed, the chloroform was administered rapidly, and, so far as possible, atmospheric air was excluded from the animals; while, in the last ten, the chloroform was administered slowly, and contained a large percentage of air. It is, therefore, evident that in the first fifty cases the chloroform narcosis was accompanied by a certain degree of asphyxia. In the first eight experiments no other efforts were made for the resuscitation of the narcotized animals, than the puncture; while in the ninth case artificial respiration was resorted to, and afterward used more or less in all the cases—but employed with especial care in the last twenty—which were the uninjured animals. The cessation of the heart's action and that of respiration, as the result of the chloroform narcosis, have been noted in forty-seven of these experiments. In forty-four cases the heart's action ceased before respiration; but in the fortieth expe-

¹ Read before the American Surgical Association, May 13, 1887.

² THE MEDICAL NEWS, vol. xlii, page 45.

³ Ibid.

⁴ Medical Record, vol. xxiii, page 263.

⁵ Ibid., page 140.

riment the heart continued to pulsate one minute after the respiration had ceased, and in the forty-second experiment the heart pulsed thirty seconds after the animal had ceased to breathe, while in the thirty-eighth the action of the heart and respiration ceased at the same time.

In thirty-four experiments where the chloroform was administered rapidly and without permitting the atmospheric air to mix with the vapor of the drug during the inhalation, the average continuation of respiration after the cessation of the heart's action was nearly forty-one seconds, while the maximum in this class stands at two minutes and the minimum at five seconds. There were in this same class of experiments ten cases in which the narcotized animals continued to breathe one minute or longer after the action of the heart had ceased, and only five cases in which respiration continued less than thirty seconds after the heart had ceased to act.

The ten experiments in which the chloroform was administered cautiously—atmospheric air being freely mixed with the vapor of the drug during its inhalation—give us a widely different result. In these ten cases there was not a single instance in which the cessation of the heart's action occurred before the animal ceased to breathe. The extremes are recorded in the report of Experiments No. 55 and 51. In the former the heart's action ceased eight minutes before the animal ceased to breathe, while in the latter case the animal breathed only forty-five seconds after the heart's action was arrested. The average duration of respiration after the cessation of the heart's action in these ten cases was two minutes and twelve seconds.

The punctures made in these sixty experiments were as follows: in the right ventricle thirty-eight; left ventricle six; right auricle six; superior vena cava three; inferior vena cava two; apex of the heart two; not stated one. The resuscitations which followed these punctures were as follows: right ventricle nine; right auricle one. The first forty experiments gave us only four recoveries, while the last twenty yielded six.

The question will naturally be asked, Why this disparity? It should be remembered in this connection that the dogs experimented on in the first series were suffering more or less from traumatism and consequently possessed less recuperative power than the twenty animals used in the second series—which were perfectly healthy and entirely uninjured. Furthermore, the first series of experiments was made especially for the purpose of determining the effects of cardicentesis in cases of chloroform narcosis, while the second series were intended to demonstrate its efficiency when employed in the treatment of these cases in connection with artificial respiration. Consequently, there was no resort in the first eight experiments of the first series, to artificial respiration or any other means of resuscitating these animals; and it is likewise true that in making the other thirty-two experiments of this series we were chiefly intent on observing merely the effect of the punctures, and consequently did not make any systematic effort at resuscitation.

The most important question which presents itself

here for our consideration is, What are the effects of a puncture of the heart in cases of chloroform narcosis? Let us now carefully examine the record of these experiments and determine their bearing upon this query. We find that there were sixty cardiac punctures, and that the heart only failed to respond in Experiments 38 and 58. A reference to the report of these cases shows that in the former instance the puncture was made one minute and thirty-five seconds after the cessation of the heart's action and one-half minute after the animal had ceased to breathe, while the post-mortem examination revealed the fact that the needle had passed through the base of the right lung, entered the right auricular appendage, and passed through this into the auricular cavity. This needle had failed to indicate any responsive action merely because it was so firmly held by the tissues through which it passed as not to be swayed by the feeble pulsations of the heart. In the latter case the report shows that the puncture was made four minutes after the cessation of the heart's action and one minute after the animal ceased to breathe. In this instance the needle was entirely free to move, and it is, therefore, evident that it entirely failed to excite any responsive action in the heart—probably because of the loss of its vital power.

A further examination of these reports shows that the needle puncture, unaided by any other means, was sufficient to arouse the heart into action in twenty-two of these experiments, while the average time which elapsed between the cessation of the heart's action and the introduction of the instrument was one minute and twenty seconds, the longest period being two minutes, and the shortest, one. The cardiac action thus excited continued in two cases, the other functions were promptly reestablished, and the animals fully recovered.

The real point of interest now centres in this question, Can the heart which has ceased to pulsate be goaded into action by a needle puncture? If it be admitted that in these twenty-two experiments the heart had absolutely ceased to perform its functions, but was aroused into action by the needle puncture, then the affirmative is proven. Should it, however, be charged that the experimenter had failed to demonstrate the cessation of the heart's action prior to the introduction of the needle, then the value of these experiments would be seriously questioned. Consequently we will introduce other evidence, in order that the value of these experiments may be made more apparent. It will not be denied that the swaying movements communicated to a needle by the pulsations of the heart, when it has been introduced into that organ, should be accepted as positive proof of its action. The needle in this position transmits every movement of the heart as accurately as it is done by the writing lever of the sphygmograph. Consequently the experimenter, who carefully watches these movements, is enabled to comprehend the peculiarities of the same.

An examination of the reports of these experiments shows that in thirty-two cases the heart did not promptly respond to the introduction of the needle, but its action was delayed, in some instances,

as long as three minutes, while in other cases only a few seconds.

The following extracts from the report of these experiments are here introduced for the purpose of illustrating the subject under consideration. The heart was punctured in Experiment No. 21 about three-fourths of a minute after the cessation of its action. The needle had remained in the organ two minutes before there was observed the slightest resumption of the heart's action. In the fifty-fourth experiment the puncture was made one minute and forty-five seconds after the cessation of the heart's action, and forty-five seconds after the animal had ceased to breathe. The heart responded to the needle a half minute after the puncture was made. Artificial respiration was then commenced, and in two minutes the dog was breathing without assistance. The respirations were, at first, very shallow, but gradually improved, and the dog fully recovered.

The last report fully shows that there had been a cessation of the heart's action, and that its resumption occurred without the use of any other means than the introduction of the needle. Additional evidence of this character is found in abundance in the report of our experiments, but it is not considered necessary to proceed any further in this direction.

Attention is now called to the fact that in nearly all our experiments with chloroform we have observed that cessation of the heart's action commonly occurs prior to the stoppage of breathing; but when the needle has been previously introduced into this organ the order is reversed. In support of this the reader's attention is now directed to the following extract from the report of the tenth experiment: The chloroform was reapplied, and respiration ceased after one minute, but the heart still continued to pulsate four minutes. . . . The needle had been allowed to remain in the heart during the whole period of our experimentation.

Having already supplied the essential facts found in the record of the experiments bearing on cardicentesis in chloroform narcosis, the question may be properly asked, Should the puncture be carried into the heart cavity, in order that blood may be abstracted?

The physiological conditions of the heart and lungs in chloroform narcosis are well understood by the medical profession. The heart is always found in diastole, and the veins in the lungs greatly distended with blood. I have made nearly one hundred and sixty post-mortem examinations of dogs killed with chloroform, and have uniformly observed these conditions, except in cases where there had been a very free escape of blood, just prior to the death of the animal. It may, therefore, be naturally claimed that the blood may be advantageously drawn from the right side of the heart in cases of chloroform narcosis. I am likewise fully assured that this procedure is not only theoretically correct, but also entirely practical and highly advantageous.

Let me ask if more rational treatment can be adopted in cases of chloroform narcosis than the puncture of the heart and the extraction of blood. In those cases in which there is already complete ces-

sation of the heart's action and respiration, what are the indications for treatment? The urgent indications are to restore promptly these important suspended functions.

It may, however, be urged against this operative procedure that it is not entirely free from danger, but the same argument may be urged with equal force against any other operation. Furthermore, the desperate condition of a patient who is suffering from chloroform narcosis may justify a resort to measures which, otherwise, should not be employed.

The only deaths observed during my experimentation, which may be fairly charged to the puncture, are those in which the vena cava was punctured. In these cases a profuse hemorrhage into the thoracic cavity unquestionably influenced the fatal termination. The punctures made into the auricle were, in some cases, followed by the flow of considerable blood into the pericardial sac, and are not entirely free from danger. The punctures made into the ventricles are not attended by any leakage from the interior of the organ, but there were occasionally found a few drops of blood within the pericardial sac, which had been poured out from some wounded cardiac vein.

The experimental study of cardicentesis, in cases of chloroform narcosis, has enabled me to reach the following conclusions:

Firstly. The puncture of the heart, especially of the right ventricle, stimulates the muscular contractions, and may be advantageously employed in the treatment of this morbid condition.

Secondly. The best results are obtained when abstraction of blood from the cavity of the ventricle is combined with the stimulating effects produced by the entrance of the aspirator needle.

Thirdly. The puncture of the right ventricle is a safer and more efficient operative procedure than the puncture of the right auricle.

THE POLITZOMETER,

AN INSTRUMENT TO INCREASE FACILITY AND PRECISION
IN THE INFLATION OF THE MIDDLE EAR.

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DUMB AND BLIND.

THE merit of the method of inflating the middle ear originated by Prof. Adam Politzer, of Vienna, has received universal acknowledgment, notwithstanding the difficulty of regulating the force to be used, and of securing, in the act of swallowing, perfect coördination between patient and physician. The method has justly been criticised as attended by the danger of overdistending the drums, which, besides being an absolute injury, may cause such suffering as to destroy the confidence of the patient. This is especially true with children and timid persons, who may fail to swallow at the proper time and thus misdirect the force of the blast, with the unpleasant consequence of either filling the stomach with air or blowing the water out of the mouth.

To avoid the disagreeable necessity of repeatedly

swallowing water, Gruber required the patient to pronounce the word "*hock*," holding the *k* sound, in the formation of which the parts are in the same position as in the act of swallowing. This was a valuable suggestion, and when correctly performed is often preferable to the use of water; but, unfortunately, requires too much intelligence to make it very available in just that class with whom trouble is experienced in the use of water.

An appreciation of the difficulties and uncertainties arising from the impossibility of adapting the power of the blast to the condition in hand, the inflation of the drum requiring in one case two or three ounces, and in another as many pounds pressure per square inch, prompts here the recommendation of a means by which these difficulties may largely be overcome.

To this end my thoughts were first directed by an instrument sold for inflating the middle ear, consisting of a simple tube reaching from the mouth to the nose, and through which one may more easily inflate the middle ears than by the Valsalvian method. Its success depends on the well-known fact that in the

ment, for which there occurs to me no better name than that of *Politzometer*, has proved satisfactory during the past four years. Its operation will be made apparent by reference to the accompanying crude outline taken from a photograph of the original instrument in operation. (Fig. 1.) The depression of the column of mercury in fractions of an inch will represent in corresponding fractions of a pound, the pressure by which the palate is forced upward, thereby closing the naso-pharynx. At the same time, in the act of blowing, the tensor palati molis, levator veli palati, and salpingo-pharyngeus muscles, which operate on the pharyngeal mouth of the tube, are favorably conditioned with reference to accomplishing the inflation of the drum. The impulse of the air blown through the nose into the naso-pharynx is resisted by the palate to a degree indicated by the depression of the mercurial column, and a corresponding pressure, plus the momentum of the blast, is expended in dilating these tubes and inflating the tympani. Under normal conditions this will be accomplished by a mercurial depression of one-eighth to one-fourth of an inch.

In my experience I have noted the following advantages to be derived from the use of the politzometer:

1st. The operation becomes one of greater precision, subject to the immediate inspection of the physician, and free from the discomforts which attend the use of water.

2d. By mild measures and a little tact the difficulties met with in the case of children and timid persons, are largely overcome, enabling any intelligent physician to deal successfully with those puerile catarrhs with Eustachian closure, which are so often neglected until no remedy is available.

3d. By ascertaining the minimum of depression required for the inflation in each individual case, overdilatation is avoided by the escape of the air into the pharynx.

4th. The minimum of depression constitutes an approximate index for comparing the conditions at intervals during treatment.

5th. By finding the air enter the middle ear with a normal minimum of mercurial depression, the absence of any obstruction is demonstrated, constituting an element of diagnostic as well as prognostic importance.

In chronic middle ear deafness, should no obstruction be found, or should obstruction be found to diminish rapidly under treatment, without corresponding improvement in the acuteness of hearing, pathological conditions, independent of the tube, will be found to exist in the drum, rendering the prognosis proportionately unfavorable.

Experience in the use of the instrument has not failed to develop the fact that it falls short of perfection. The success of its operation depends on the power of the expiratory muscles—and since the maximum power of these muscles seldom exceeds

FIG. 1.



a. Scale. b. Connecting tube. c. Politzer bag. d. Diagnostic tube.

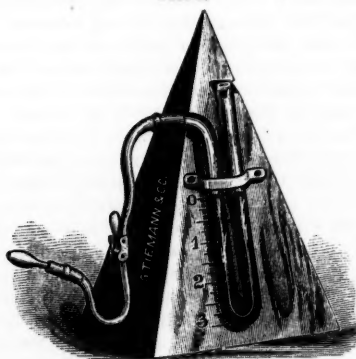
act of *blowing*, the palate is driven against the posterior pharyngeal wall, closing the naso-pharynx.

My first experiments were made by requiring the patient to make an effort to blow the bottom out of a drachm vial, during which act the air was driven into the middle ears by the compression of the bag in the usual way. The success of this prompted the substitution of a rubber tube communicating with a mercurial column supplied with a graduated scale. This acts as a measure of the resistance required to overcome the obstruction presented to the entrance of air through the Eustachian tube. Such an instru-

three pounds to the square inch, an obstruction which exceeds that degree must be overcome by the catheter or bougie. In many persons the maximum power is so feeble as to render the use of water or the sound & more available.

The nose-piece of the inflating apparatus should have a free opening and be adapted to fit the nostril. Experience condemns the projecting rigid extension which is liable to cause pain, destroy confidence, and rob the treatment of its usefulness. It should be placed in position while the mercurial column is depressed and the remaining nostril closed the last thing before inflating, else the velum palati may drop before the bulb is pressed, when the effort will be expended in driving the air into the stomach.

FIG. 2.



NOTE.—In a conversation with Dr. Tansly, of New York, I was told that he had recommended that in place of swallowing, the patient blow forcibly with puckered lips. In *Ophthalmic and Otic Memoranda* (Roosa and Ely) it appears that Dr. Holt, of Portland, advises closing the lips tightly and distending the cheeks with air.

RECURRENCE OF SYMPTOMS OF POISONING, AFTER SNAKE-BITE.¹

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IN 1884, I reported, in *The American Journal of the Medical Sciences*, 1884, n. s., lxxxvii. p. 422, a case of copperhead snake-bite, and gave a detailed account of the symptoms, and a résumé of some of the literature on the subject of poisonous snake-wounds. Care was taken to state particularly that several cases had been published, in which, after varying periods of time, a recurrence of poisonous symptoms took place, generally on, or about, the anniversary of the bite, and I am now able, after having watched two cases, to add the weight of my testimony in behalf of the recurrent theory.

Before doing so, perhaps it may be well to recapitulate briefly the evidence which we possessed

at the date of my previous paper. The first case was reported by Dr. Sweeny, of Rushville, Illinois, in the *Cincinnati Lancet and Observer*, 1860, n. s., iii. p. 318, who stated that his patient, a male, who had been bitten many years before (nearly thirty) by a copperhead, suffered from painful symptoms in the fingers which had been injured, analogous to those which he had experienced at the time of the accident. These symptoms continued for some time. Dr. Wm. Stockbridge, in the *Boston Medical and Surgical Journal*, 1843, xxix. p. 40, reports three cases of copperhead bite with recurring symptoms; the first, a boy, aged ten, who received the wound on his leg. Ordinary remedies were applied, and he recovered, but for eighteen years thereafter, precisely on the anniversary of the bite, he had a recurrence of the symptoms similar to those first experienced. Gradually the attacks became less marked, and finally disappeared. A female slave, who had been bitten, suffered for a period of ten years, and a lady was affected in the same way for twelve years. Dr. R. T. Coleman, in the *Virginia Clinical Record*, 1872-3, ii. p. 137, reports two cases of moccasin bite, in which a scaly eruption showed itself for several successive springs, in individuals under his care. Dr. H. G. Piffard reports a recurrence of a skin affection for several years, in a female bitten by a rattlesnake.

The case of a photographer, bitten by a copperhead, which I reported as before mentioned, I have watched carefully from 1883 to 1886, the last attack commencing on May 30th, the anniversary of his injury, and lasting over a week. His condition about the acme of the attack was as follows: Pulse quick; complaints of general malaise; pain and stiffening in the bitten finger, which extends up the arm; surface of hand shows bluish mottling, with lines of redness extending as far as the shoulder along the course of the lymphatics. He had slight chilly sensations, and some fever. Obligated to quit work, as he could not concentrate his attention on it. Has taken nothing but whiskey and quinine. These notes were read to him, and he stated that they represent fairly his condition at each recurring period since the bite.

Dr. W. M. Gray, Microscopist of the Army Medical Museum, secured at this time a specimen of blood from the bitten finger, and reported as follows: White blood cells increased in quantity in the proportion of 3 to 500 of red. They present a highly granular appearance, and contain numerous vacuoles; where some few have burst and exuded the granules, they stain like, and resemble, micrococci. The red corpuscles are normal; but when they assume the crenated form, which is common to them, they differ from the ordinary crenation usually seen, assuming an appearance like chestnut burrs. The drawings made by Dr. Gray represent this appearance. It may be stated that the microscopical examination of the patients' blood made just after the bite, by Dr. McConnell, showed that the white corpuscles were relatively few in number, and that most of the red corpuscles were crenated. Dr. Isaac Ott states that the blood, after copperhead poisoning, shows no microscopic changes in its cor-

¹ Read before the Medical Society of the District of Columbia, Washington, D. C.

puscles or spectrum, but I am unable to say if he has had an opportunity of examining the blood from a person recently bitten by the snake.

The other case under observation is that of Mr. A. Zeno Shindler, one of the artists connected with the National Museum, who was bitten June 2, 1882, by a "Florida harlequin snake" (*Elaps fulvius*), No. 12779 of the National Museum Reserve series, and whose accident was mentioned in the paper which I read. Mr. Shindler informs me that he made an excellent recovery from the bite, under the care of Dr. Taylor, but that in about a year he was troubled with considerable pain in the injured finger, and a small abscess formed at the seat of the bite, with some suppuration; and that each succeeding year since he has been troubled in the same way, and in addition to this he has lost each year the nail from the affected finger. On the last occasion, however, suppuration was prevented by the application of bandages saturated with aqua ammonia, which were used as soon as the symptoms developed.

Is there any explanation to be made of this peculiar occurrence of symptoms long after the original injury? Are they due to neurotic influence or hyperæsthesia of the affected part in consequence of the mind dwelling upon the accident at the succeeding anniversaries? Such might be the case for a few years, but it seems almost incredible that this should be the cause in the cases reported by Drs. Sweeny and Stockbridge, in which the patients suffered for eighteen and thirty years. Mr. Shindler states very positively that in his case he is quite sure that neurotic or mental influence has nothing to do with a return of the symptoms, for he is only aware of the anniversary of his bite by the pain which comes on at this particular time, and generally at night, it being so severe as to awaken him from sleep.

Another interesting fact is that recurring symptoms mostly occur after bites of the serpents of the genus *Ancistrodon* (copperheads and moccasins), but few cases being found on record from the bites of *Elaps* (vipers) and *Crotalus* (rattlesnakes). I have studied the matter carefully, but have been unable to solve the problem, and simply record the facts.

MEDICAL PROGRESS.

MICROSCOPIC EXAMINATION OF THE INTESTINAL CONTENTS OF NATIVES OF INDIA WHO PERISHED WITH CHOLERA.—WEISSER and FRANK, of the Institute of Hygiene in Berlin, have published the results of Koch's examination of a large number of microscopic preparations made at the Sealdah Hospital at Calcutta. Dejecta from 90 cases were examined, in 83 of which the comma-bacillus was found. In the 7 cases lacking the bacillus the presence of large quantities of blood, or defective preparation of the slide, accounted adequately for the failure to find it. The conclusions drawn from these cases were:

1. Microscopic examination alone generally suffices to demonstrate the presence of the comma-bacillus in cholera dejecta.

2. This is true in the most acute cases of cholera.

3. The number of bacilli is generally greater the earlier in the disease death occurs; when the fatal result is late the number is much smaller.

4. In cases dying from cholera typhoid, and not genuine cholera Asiatica, the bacilli are wanting.—*Deutsche medicinische Wochenschrift*, May 5, 1887.

TREATMENT OF VARICOCELE.—DR. THIRIAR, of Brussels, in a clinical lecture on the "Surgical Treatment of Varicocele," after mentioning that numerous methods of operation were in former times proposed and practised—such as castration, the section of the vas deferens, and the ligature of the arteries of the cord, which necessarily interfere with the functional activity of the testis—spoke of the modern or therapeutic method as consisting essentially in the arrest of the circulation in the venous plexuses surrounding the vas deferens. Until quite recently, however, so many accidents—some of them fatal—followed operative procedures of this kind that many surgeons objected to resort to them for an affection which, however trying to the patient, cannot be considered as dangerous to life. Since the adoption of antiseptics, the danger of these operations has been reduced almost to *nil*. The operation practised by Dr. Thiriar is the combination (proposed by Guyon) of Sir A. Cooper's plan of excising the skin with the old method of excising the varicose veins themselves; Heurteloup's plan of excising a flap of skin from the posterior surface of the scrotum he does not approve of, following Guyon and other surgeons in believing that the varicose condition is usually in the anterior plexus. His plan is as follows: An elliptical flap of skin is excised from the front of the scrotum, and the bundle of veins dissected out and tied in two places, the intermediate portion being excised if the tumor is considerable. The dissecting out of the veins is a somewhat difficult matter, as there are several fibro-cellular layers to divide or tear through; the artery has to be carefully separated from the veins, a proceeding which up to the present time Dr. Thiriar has not found attended with difficulty. The wound is washed with a corrosive sublimate solution, and the lips united by a continuous suture, which is the form Dr. Thiriar prefers as a rule; antiseptic dressings and compress bandages are applied, and in a few days the patient is discharged permanently cured.—*Lancet*, April 30, 1887.

ANTIPYRIN IN WHOOPING-COUGH.—SONNENBERGER has treated seventy cases of whooping-cough with antipyrin, in doses from one-sixth of a grain in very young children, to eight and fifteen grains in older children and adults. It was given in water and fruit juices, and was readily taken. Collapse did not occur. All of the cases were favorably influenced, and but five deaths occurred, two from pneumonia, and three from tuberculosis.—*Wiener medicinische Presse*, May 1, 1887.

ARTIFICIAL AND HYPERALIMENTATION IN PHTHISIS.—In an account of the effects of artificial and hyperalimentation, as practised in Professor Pel's wards in Amsterdam, DR. VAN EEDEN states that the meat-powder treatment introduced by Débove (which he had had an opportunity of studying in Paris) is always of service in phthisis

when the disease is not very far advanced, and when it is not of a "malignant" nature. The cases which do best under this treatment are those in which there is no hereditary taint and where the disease has progressed regularly, with a not very rapid loss of strength, and with only slight hectic, anorexia, anæmia, and emaciation. The chances of successful treatment are slight where the disease has made rapid progress, with a continuous high temperature. The existence of a considerable degree of pyrexia is, however, no contra-indication to the use of the treatment. If diarrhœa and gastric irritation are produced by the artificial alimentation, it is best to discontinue it. In order to accustom the stomach to the meat powder, small quantities only should be given at first—not more than about half a pound during the twenty-four hours; this amount may gradually be increased to one pound and a half. The use of the œsophageal sound for the introduction of the food is considered by Dr. van Eeden as advisable in all cases, and imperatively necessary in hyperalimentionation. Quantities exceeding three pounds of meat powder per diem, however, are not by any means always required, and should only be given when smaller amounts do not succeed, and where the patient bears the treatment well. The method must be diligently and patiently practised, and the weight of the patient accurately noted. Dr. van Eeden remarks that so little is known of the way in which hyperalimentionation controls the development of tubercle, that whoever attempts to practise Débove's treatment must be prepared to meet with many difficulties and disappointments. Notwithstanding this, however, he had witnessed some surprisingly good results from its employment.—*Lancet*, April 30, 1887.

FORMULA FOR THE HYPODERMATIC USE OF CARBOLICUM OXYDUM.—SCHADEK gives the following formula as used by hypodermatic injections in the gluteal region in ten cases of syphilis:

R.—Hydrarg. carbolici oxydat.	gr. 30.
Mucilag. gum. arab.	3 1.
Aquæ destillat.	3 25.

One-half the contents of a syringe containing three-tenths of a grain was injected every second or third day.

Abcess and infiltration seldom occurred.—*Monatshefte für praktische Dermatologie*, 1887, No. 8.

PHENATE OF COCAINE.—VIAU, of Paris, has mixed one part of phenic acid to two of cocaine, heated gently, and obtained a substance which gave good results in eighty-six cases of extraction of teeth, by producing local anæsthesia. This substance is injected in solution by a fine syringe into the tissues about the teeth, care being taken to avoid the dropping of the substance into the pharynx, after which the mouth is rinsed with cold water. Local anæsthesia is generally sufficiently advanced to allow extraction in five or ten minutes.—*Les Nouveaux Remèdes*, April 27, 1887.

NUTRIENT ENEMATA.—The *Therapeutische Monatshefte* for April, 1887, gives the following formula used by Ewald, and adds further details in the preparation of nutrient enemata.

The simplest enema is prepared by beating up three or five eggs with five ounces of a solution of grape sugar fifteen or twenty per cent. in strength; this should be gently injected as occasion offers.

To allay irritation starch solution or mucilage water may be added, making the liquid of greater consistence; or a few drops of tinct. opii may be used. Before the nutrient enema is given an injection of tepid water or solution of common salt, eight and a half ounces of fluid, should be used, and the nutrient enema not introduced until the bowel is thoroughly emptied. If this precaution is neglected, the nutrient enema may be immediately rejected. An enema should never be larger than eight and a half ounces. It is better when this quantity is given in two or three doses during the day.

Nutrient enemata may be prepared as follows, when more elaborate methods can be followed:

Two or three eggs should be beaten with a table-spoonful of cold water. As much powdered starch as will lie upon the end of an ordinary kitchen knife should be added, with half a cup of twenty per cent. solution of grape sugar (obtainable at druggists); the whole should be heated gently, and a wineglassful of red wine (claret, etc.) added.

The mixture should be gently beaten, care being taken that it is not so hot as to coagulate the albumen of the eggs used. The whole should not exceed half a pint in bulk.

If meat peptone or milk peptone is convenient, a tea-spoonful of the peptone should be added to the sugar solution; it is not necessary, for eggs so prepared will be readily absorbed.

The injection should be given with a syringe having a long, flexible tube, or with an irrigator which has a flexible tube with large opening.

After injections the patient should lie quietly upon the back or side for some time.

THE TREATMENT OF CATARRHAL JAUNDICE.—DR. GLUZINSKI, writing in a Polish journal, states that in cases of catarrhal jaundice he has found excellent results follow the treatment recommended by Krull, viz., the repeated injection into the bowel of large quantities of cold water. This increases the peristaltic action of the intestines, and removes any mechanical obstacle to the flow of bile. Again, as has been shown by Röhrig and Mosler, who injected large quantities of cold water into dogs, the bile is thus rendered both more liquid and more abundant, so that it more easily overcomes any obstruction. At first water at 59° F. is injected into the bowel until the patient complains of a feeling of distention in the abdomen. He is then made to retain it as long as possible. Most patients manage to retain two litres for from a quarter to half an hour. The next day the enema is repeated, but with water about 4° higher. The temperature is again raised on each succeeding day, but when 72° has been reached no further increase is made. The reason of the increase is that the repeated introduction of cold water is apt to irritate the mucous membrane of the bowel. Altogether four or five enemata are sufficient to produce the desired effect. The increase of the biliary secretion may be judged of by the color of the feces. Of course, the diet is attended to in order to prevent a recurrence of the affection.—*Lancet*, April 23, 1887.

THE ETIOLOGY OF DIABETES.—The *Lancet* of April 30, 1887, reports, in the recent Congress of German Physicians, the following of interest:

Of very far-reaching and undoubtedly also practical importance will prove the experiment of the young PROFESSOR VON MEHRING, of Strassburg, who produced diabetes in fasting dogs by large doses of florhidein, an extract of the root of the plum-tree, and who expressed his conviction that the sugar is formed solely by decomposition of albumen. These researches and operations seem worthy of special notice, as they are calculated to modify profoundly the views held of this disease. Leube congratulated von Mehring, and gave expression to the hope that we might now succeed in getting animals continuously diabetic.

LIGATION OF THE INNOMINATE.—DURANTE's recent case is reported in the *Lancet* of April 30, 1887, as follows: The patient, a man of about forty-five years, was suffering intense pain from pressure by a very perceptible aneurism of the second part of the right subclavian. Other means having been tried with no good result, Professor Durante, of Rome, determined upon ligation of the innominate. Accordingly, on March 25th, the operation was performed, with strict antiseptic precautions, the vessel being tied in two places—viz., immediately below the junction of the subclavian and common carotid; and again slightly lower down. The vertebral artery was also tied. The ligature used was No. 3 carbolized catgut. The after-progress, up to the present date (April 5th) has been most satisfactory. Circulation in the right upper limb and side of the head has been completely restored, and the patient's general health is good, with the exception of obstinate constipation, which may account for a rise of temperature having occurred. The external wound, excepting a small drainage aperture, has healed by first intention.

TREATMENT OF PHTHISIS BY MENTHOL.—ROSENBERG has obtained the following results: Inhalations of 3 per cent. solution, and doses of $\frac{1}{2}$ to $\frac{3}{4}$ of a grain, and later 15 grains to 20 grains six times daily were given. Early unpleasant effects—burning in the throat, a feeling of heat, giddiness and headache—disappeared in four to six days. Early good effects were increased appetite and lessened night sweats. Lessening of secretion and irritating cough followed. A decided general benefit resulted. Temperature and bacilli were uninfluenced.

If any permanent benefit can be expected from this treatment it is in beginning phthisis. The following is Langaard's formula for menthol in-pill form:

R.—Menthol gr. 30.
Sacch. albæ,
Gummi Arab. āā gr. 15.
Aq. dest. q. s.
Ft. pil. 20 in num.
Cover with gelatine.

Each pill contains $1\frac{1}{2}$ grains menthol.—*Wiener medizinische Presse*, April 17, 1887.

ABORTIVE TREATMENT OF BOILS BY INJECTIONS.—BIDDER has had excellent results in the treatment of boils by injecting beneath the skin, at the margins of the area of inflammation, a two per cent. solution of

carbolic acid. When suppuration occurred an incision was avoided by aspirating the abscess with a fine needle, and injecting the carbolic solution.—*Berliner klinische Wochenschrift*, No. 14.

HOW TO SUTURE THE INTESTINE.—SIR WILLIAM MACCORMAC, in an oration on abdominal section reported in the *British Medical Journal* for May 7, 1887, writes as follows:

There are three conditions required to insure successful suture of the intestine:

1. Two adequately broad and sufficiently wide surfaces of peritoneum must be brought into contact.
2. The mucous membrane must be excluded, for when the needle passes through the whole thickness of the gut, peritonitis generally ensues from leakage taking place along the line of the thread.
3. Rapidity of execution is of extreme importance, and that form of suture is the best which can be effectively applied in the shortest time.

In 1826, Lembert introduced a method of bringing the two adjacent serous surfaces into contact, avoiding penetration of the mucous coat. It is the preferable one to employ in all wounds of the bowel; sufficient inversion may be thus easily accomplished without causing obstruction of the lumen of the tube; when the wound is small or incised, the needle may be introduced a line and a half or two lines from the margin, and then brought out at the edge of the serous coat, the same being done on the opposite side. This will suffice in clean-cut wounds; but, where the edges are bruised, it is best to exclude them by entering the needle about three or three and a half lines from the margin, and carrying the suture through the bowel a line distant or more from the edge. The number of stitches must be sufficient to bring the parts everywhere into accurate contact, and care taken not to tie the sutures too tightly, as it may lead to gangrene and consequent failure to procure union. Experimentally, this has been found to be the most frequent cause of non-union. The ends of the sutures are cut short, and the intestine returned to the abdominal cavity. When the surfaces are drawn together sufficiently to bring them fairly into contact, the subsequent swelling will hold the parts firmly until the rapidly formed adhesive material securely glues them together. When the omentum is much injured, it is probably best to excise the damaged parts after applying ligatures.

EXAMINATION OF A STOMACH WHOSE PYLORUS HAD BEEN RESECTED FOR CARCINOMA FIVE YEARS BEFORE.—WÖLFLE, of Vienna, reports a case in which in April, 1881, he had resected the pylorus for carcinoma. Death occurred five years after from exhaustion produced by a disseminated return of the disease; the patient's life had been comfortable, and almost free from stomach disturbances. Examination showed the stomach nearly normal in size. The site of the suture could not be found externally. When the duodenum and stomach were opened a constriction, with folds of mucous membrane, was seen at the former site of the pylorus. On microscopic examination mucous glands but no peptic glands were found, and a compensatory hypertrophy of muscle and connective tissue forming a new sphincter.—*Wiener med. Presse*, May 1, 1887.

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SATURDAY, JUNE 4, 1887.

WAS IT A DEATH DUE TO ETHER?

WE reply in the negative. The case in question occurred in Philadelphia, last week, and was the subject of comment in the newspapers, and of an extra-judicial opinion by the Coroner. The facts with which we are concerned are these:

A minor surgical operation being necessary, ether was employed as the anæsthetic. No accident happened during the anæsthesia, and no unusual incidents followed the operation until the fifth hour thereafter, when the patient suddenly expired. A jury summoned by the Coroner rendered a verdict which ascribed the death to ether, but implied no censure of the two physicians in charge of the case. The coroner, however, animadverted with no little severity on that lack of skill which failed to detect the "fatty heart." The Coroner's physician, who conducted the autopsy, testified to the existence of fatty degeneration of the cardiac muscular tissue, and without hesitation referred the fatal ending of the case to the action of ether. An examination of the brain appears not to have been made, nor was the vascular system inspected with the view to detect thrombus or emboli. Such omissions, if made, must cast doubt over the conclusions arrived at from insufficient data, and are the more reprehensible since the physicians are held up to public reprobation when innocent of offence.

To ordinary observation, without prejudice, the two facts of the case—the inhalation of ether, the death several hours after—seem too remote to have the relation of cause and effect. The supposed fatty heart bore the strain of the ether inhalation and the surgical procedure, and yet succumbed when the anæsthetic was no longer in action, and

the shock of the operation, if any, had passed away. It is no doubt true, as recently stated in these columns, that a fatal result may occur from ether inhalations several days after, because of pulmonary inflammation induced by prolonged contact of ether vapor. It is not alleged that the case in question was of this character; but, finding a fatty heart, the fatal ending required no further explanation. Did this conclusion turn on the naked-eye appearances, or was it decided by a microscopic examination of the muscular elements?

The Coroner seemed to have been outraged in his innermost moral consciousness that the fatty degeneration of the heart had eluded *ante-mortem* examination. We opine that his strictures are not justified by our existing knowledge of the rational and physical signs of this morbid condition. We have the conviction that considerable fatty degeneration may exist without any definite symptoms, and all of the usual signs of this affection may coexist with a normal state of the organ. Assuming that the heart of this patient had undergone, to some extent, degenerative changes, should this condition inevitably preclude the administration of ether? An answer to this question is furnished us by the mode of dying in ether narcosis. It is now conceded on all sides that failure of the respiration is the mode, the action of the heart being rather stimulated than depressed by ether.

To connect the death of this patient with the ether inhalation after several hours had elapsed, is to do violence to every fact; to assume as a cause of the fatal ending a condition of the heart which had passed through the ordeal of a surgical operation and complete insensibility, is to tax credulity above its power of endurance; and to ignore the results of physiological investigations that have demonstrated the nature and character of the dangers in anæsthesia by ether, is to substitute for exact knowledge the vagaries of uninstructed opinions.

To permit the Coroner to give utterance to extra-judicial opinions that reflect on the judgment and attainments of physicians who have the misfortune to come within his jurisdiction, is to touch nearly the honor of the medical profession. To permit the Coroner's physician to announce hasty opinions after insufficient examination that discredit the knowledge and reflect on the integrity of the physicians concerned, is to place in his hands an opportunity for mischief that can hardly fail of being utilized. If post-mortem investigations that involve mortification or disgrace, or merely annoyance, are conducted without giving an opportunity to the physician implicated, to observe for himself, is it not certain that a grievous wrong is being perpetrated, and the good name created by a life of honest endeavor, put at the mercy of caprice, of prejudice,

or of ignorance? We learn that in the case now under consideration, the *post-mortem* was conducted without acquainting the physicians concerned, and thus affording them the opportunity to prepare for their own defence.

It must be obvious to the least observant physician, that there is an increasing distrust of the medical profession, growing out of those personal discussions in which the integrity and acquirements of each other are called in question. The world is apt to adopt that view of a body of men to which they themselves give expression. In these times of combinations, of syndicates, of organizations, the medical profession is apparently engaged in a process of disintegration rather than solidarity.

THE ACTION OF IODOFORM ON SEPTIC MATERIAL.

THE fact that iodoform is used so generally, both in this country and abroad, certainly points toward its being a drug of great value, but in reality we have little more than clinical evidence on which to base an opinion concerning it. Quite lately, at the Sixteenth Congress of German Surgeons, this subject was thoroughly discussed by BRUNS, of Tübingen, SÄNGER, of Leipzig, and several other observers, and a large amount of evidence was brought forward to show that iodoform acts upon any septic matter with which it may come in contact with considerable power, and the results given by Säger of some three hundred experiments made to determine its action on the bacillus of anthrax are extremely interesting.

To be brief, Säger found that the growth of these bacilli was checked by iodoform, and their reproductive power decreased, while, at the same time, certain degenerative changes seemed to take place in their anatomical arrangement. Experiments made on the mouse by the injection of this bacillus proved that if the culture had been subjected to the action of iodoform for from one to three days death resulted in twenty-four hours, while, if older cultures were used, death was delayed. When iodoform anthrax cultures of six days were injected recovery took place. Other experiments were made by placing bacilli in a "pocket" in which iodoform had already been placed, and covering them with the same drug. Under these circumstances the bacilli, in the course of a few days, became harmless.

Professor Bruns expressed the opinion that the antitubercular action of the drug was established, and detailed fifty-four cases of tuberculous abscess from which the pus had been removed by aspiration, after which the abscess cavity was washed out by from one to three injections of an iodoform solution containing ten per cent. of glycerine and alcohol. Cures were produced in forty of the fifty-four cases,

though, in many of them, the cavities were of sufficient size to hold a pint. This observer believes that the drug acts directly on the tubercular tissue, destroying it, and causing its replacement by healthy granulations, and detailed the results of several cases in which histological studies of the abscess walls showed a progressive lessening of the number of the bacilli, with a disappearance of the exudation, and a rapid increase of granulation tissue.

From the evidence before us it is evident that iodoform, as used in surgery, acts much more as a prophylactic than as a true disinfectant, preventing the multiplication of disease germs in a wound, but scarcely capable of influencing those already present before they can effect any ill results.

It is a point not to be forgotten in using any drugs of this class that all the tissues of the human body, being more highly organized than the bacilli themselves, are much more readily destroyed than the germs against which they are used, and the point of difficulty is to find a substance which will act on the bacillus without injuring the man. Iodoform seems to approach more closely this desirable condition than any other substance used in surgical dressings, but the practitioner should never lose sight of the fact that a large number of cases of grave or fatal poisoning have resulted from the spreading of even a small quantity over a raw surface. One or two deaths have occurred in which only a drachm of the powder was used, scattered over a considerable area, and in some cases slow or chronic poisoning has resulted from its use for a long period in large quantities, the lesions after death being found to be those of fatty degeneration.

ETHER IN CARDIAC DYSPNŒA.

THE death of Dr. Wilson Fox, of England, within the last few weeks, has left a gap in the ranks of the profession not easily filled. For many years he had labored earnestly, both as a teacher and writer, in the field of thoracic disease, particularly as connected with the lungs, and it is curious that even in his last hours he indirectly should have brought to our notice the use of ether for the purpose of relieving cardiac dyspnœa, and perhaps no better manner of discussing the subject can be devised than to give a short history of his physical condition as it comes to us through the *Brit. Med. Journ.* of May 7, 1887.

Eleven years ago Dr. Fox had a severe attack of pneumonia complicated by endo- and pericarditis, which left the cardiac valves in a damaged condition, and during the spring of 1886 he had a second attack of pneumonia, from which, however, he quickly recovered. The sudden illness and death of a brother of the same disease, occurring when he was already broken down by a hard winter's work, seemed to be the last thing needed to increase his loss of vitality,

and early on the morning of the fourth day after the death of his brother he himself became a victim of the same disease, the onset of which announced itself by dyspnoea, syncope, and great prostration. Twenty-four hours later the dyspnoea and prostration were suddenly markedly increased, and there was also much pain in the side which, however, was muscular and not pleuritic. His symptoms now pointed to cardiac weakness rather than pneumonia, and although he rallied once or twice it was only to return to a worse condition than before, so that, with total possession of his mental powers, he gradually sank, although death at the last came rather suddenly.

The point in connection with this case to which we desire to call particular attention is, that on three successive days "his sense of dyspnoea was relieved, and he was free from all pain" after the subcutaneous injection of ether. From our knowledge of the physiological effects of ether, the *modus operandi* of its action in such a case is not hard to understand except in so far as concerns the relief of pain, since it is scarcely possible that a sufficient quantity of ether can be given in this manner to produce partial anaesthesia. This is not, however, the point to which we desire particularly to call attention, but to the relief of the more pressing and worrying symptom of dyspnoea.

It will be remembered that ether in small quantities acts both on the respiratory centre and heart-muscle as a stimulant, and that in pneumonia the resistance to the passage of the blood from the right side of the heart through the lungs produces distention and palsy of the right ventricle. Under these circumstances dyspnoea arising from cardiac failure soon asserts itself, but is relieved if, by the aid of cardiac stimulants, we can enable the heart to overcome the resistance and free itself of the abnormal quantity of blood. It is probable, then, by this double action on respiration and circulation that ether in such a case does good; but it is worthy of remark that, as a general rule, less fugacious cardiac stimulants are more desirable, since in the case of ether stimulation the effects pass off as rapidly as they appear. Nevertheless, in those cases in which cardiac dyspnoea suddenly becomes alarming it is well to remember that the hypodermatic injection of small quantities of ether may bridge over the danger till more constant and equally powerful remedies can be given.

WAKING NUMBNESS.

In the current number of *The American Journal of the Medical Sciences*, DR. ANDREW H. SMITH describes a curious neurosis characterized by numbness on waking, either general or confined to the distribution of the ulnar nerves. Two of the four

cases which he reports had been subjects of organic nerve lesion, but in the others there was no disturbance of motion, and the abnormal sensation seemed purely subjective. The duration was rarely more than a few minutes, though in one case it lasted sometimes for an hour or two. The condition is not serious, and is met with in hysterical or debilitated persons. Dr. Smith is apparently not aware that Dr. Weir Mitchell described the affection some years ago in his lectures on Diseases of the Nervous System, in which he states that "in the more usual cases the sleeper awakens with numbness, or rather tingling and numbness, of one arm or of a leg only, which is unfrequent, or the whole side, including the face, and even the tongue, which is now and then attacked alone. The disorder may be mere tingling, or actual loss, or rather lessening of tactile sensation; but in any case it rapidly fades away, or yields to a little friction."

In an interesting article on "Local Numbness," in the *Lancet* of Dec. 4, 1886, Dr. J. E. Squire gives several cases in which numbness was a characteristic feature on awakening.

Local treatment does not appear to be of service, but measures calculated to improve the general health usually cause a disappearance of the unpleasant symptoms.

THE arrangements for the forthcoming International Medical Congress are actively progressing. The Committee have announced that the transatlantic steamship lines have made a reduction in rates to members, and in due time, no doubt, a reduction in railroad rates will also be secured.

The following Addresses are announced to be made in the General Sessions: Prof. Semmola, of Naples, on "Bacteriology and its Clinical Therapeutics;" Dr. Neudorfer, of Vienna, "On the Military Medicine of the Present and of the Near Future;" Prof. Esmarch, of Kiel, "On Bloodless Operations in Surgery;" Dr. Lutaud, of Paris, "On the Influence of the Discoveries of American Surgeons on the Development of Gynecology in Europe," and Dr. Austin Flint, of New York, "On Fever, its Causes, Mechanism, and Rational Treatment."

The complete programme of papers to be read in the Sections will probably be published at an early day, as the last of April was fixed as the latest date at which titles must be handed-in, and from it, in connection with the list of the members who are expected to participate in the discussions, an estimate can be formed of the scientific attractions and the international character which the Congress will present.

The social features of the gathering have not been overlooked. The Government has appropriated \$10,000, which, in connection with other available

resources, will insure a liberal public hospitality, while, doubtless, there will be dispensed the same large private hospitality as has characterized the preceding Congresses.

THE thirty-eighth annual meeting of the American Medical Association will be held at Chicago, in Central Music Hall, on Tuesday, Wednesday, Thursday, and Friday of next week, under the presidency of Dr. E. H. Gregory, of St. Louis. The Presidents of Sections are as follows: *Medicine*, Dr. J. S. Lynch, of Baltimore; *Obstetrics*, Dr. F. M. Johnson, of Kansas City; *Surgery*, Dr. H. H. Mudd, of St. Louis; *State Medicine*, Dr. George H. Rohé, of Baltimore; *Ophthalmology*, Dr. X. C. Scott, of Cleveland; *Dental Surgery*, Dr. J. V. Marshall, of Chicago; *Medical Jurisprudence*, Dr. I. N. Quimby, of Jersey City.

THE Maine Medical Association will hold its 35th Annual Meeting at Portland on June 14th, 15th, and 16th, under the presidency of Dr. J. B. Walker, of Thomaston.

THE New Jersey Medical Society will hold its one hundred and twenty-first annual meeting in the Baldwin House, Beach Haven, on Tuesday and Wednesday, June 14th and 15th, commencing at 4 P.M. on Tuesday. Dr. Charles J. Kip, of Newark, is president for the year.

It will be remembered that Dr. Darby, of Morrow, Ohio, was sent to jail for contempt of court in refusing to give expert testimony without compensation. We learn from the *Cleveland Medical Gazette* that the next higher court has sustained the decision, and that a fund is now being raised to carry the case to the Supreme Court.

BELLEVUE HOSPITAL, New York, is about to establish a school for the training of male nurses. The enterprise has received a liberal endowment.

At the last meeting of the Board of Directors of the New York Post-Graduate Medical School and Hospital, held on May 31st, Dr. Charles Carroll Lee was elected Professor of the Diseases of Women. Associate Professor J. R. Nilsen was also elected professor in the same department to fill the vacancy caused by the resignation of Dr. A. J. C. Skene.

Several new instructors were appointed, among them, Dr. Joseph O'Dwyer, inventor of intubation of the larynx.

The last year's sessions of the school have been attended by more than two hundred matriculates.

SOCIETY PROCEEDINGS.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

*Ninth Annual Congress,
held in New York, May 26, 27, and 28, 1887.*

(Specially reported for THE MEDICAL NEWS.)

THE PRESIDENT, DR. E. FLETCHER INGALLS, of Chicago, occupied the Chair. He thanked the Association for the honor conferred upon him by electing him to the office of President, and then offered some remarks on

INTUBATION OF THE LARYNX.

In 1880 O'Dwyer, he said, introduced intubation, and gave to the profession one of the most useful operations of modern times. In the after-treatment, while the tube is in position, no liquids should be allowed. Sometimes small quantities of liquid can be taken, but the danger of exciting bronchitis or pneumonia is so great that fluid should be entirely prohibited. The largest tube that can be introduced is the one most likely to be retained. The danger of the tube being forced into the trachea was referred to. In four or six days, in favorable cases, the swelling and false membrane will have so much diminished that the tube will be coughed up finally, and need not be reintroduced.

He had performed intubation in twelve cases of diphtheritic laryngitis. In three recovery followed. By a coincidence the cases of recovery were the only ones in which he had charge of the after-treatment. One case lived eight days, and then died suddenly an hour after the tube had been removed. Another lived eight days, and then died of pneumonia. Details of the cases treated were given. As a result of his experience he concluded that the treatment after intubation should be: 1. Prohibition of fluids, except by enemata. 2. Some preparation of mercury should be given in large and frequent doses. In case of development of bronchitis, or pneumonia, respiratory and cardiac stimulants should be given frequently, but cautiously.

By correspondence and study of the literature he has collected 514 cases, with 134 recoveries. The percentage of recoveries will be greater when more care is exercised in the use of fluids. When medicines fail, no time should be lost in providing for the free entrance of air, either by intubation or tracheotomy. Intubation can be done more quickly, more safely, with less shock to the patient, and less objection on the part of the parents. The operator should be prepared to open the trachea, if loosened membrane should be forced down into the trachea. When the tube fails to relieve the dyspnoea tracheotomy should be performed, unless there is reason to believe that the latter operation will fail. When membrane is loose in the trachea, no time should be lost in the use of forceps, which rarely succeed, but tracheotomy should be resorted to. The results obtained by intubation are about as good as tracheotomy at all ages, but apparently better in young children.

DR. CHARLES E. SAJOUS then presented

A STUDY OF SOME OF THE OBJECTIONABLE FEATURES OF INTUBATION.

At present, he said, statistics favor the operation of tracheotomy, but he believed that intubation would prove the better operation when the mechanical defects

are overcome. The principal objections, according to the degree of danger, are: 1. The tendency to the obstruction of the tube by fragments of membrane. 2. Crowding down of loose membrane during introduction of the tube. 3. Passage of food into the trachea. 4. Momentary arrest of respiration during introduction of the tube. 5. Liability of the tube to be coughed out. And 6. Slipping of the tube into the trachea. The tendency to obstruction was attributed to the limited diameter of the tube; the crowding down of membrane to the length of the tube; the passage of fluid, to the weight of the tube; the liability to be coughed out, to the limited diameter of the tube, and the slipping of the tube to the weight of the instrument and the formation of the head.

He exhibited instruments on the principle of the bivalve speculum, which were intended to embody the suggestions made above. This tube obstructs the larynx very little, leaving the breathing space almost as great as normal.

He also exhibited an instrument intended to remove loose membrane from the larynx. The instrument consisted of forceps which could be protruded into the larynx, by an arrangement in the handle, the required distance and the membrane grasped.

DR. F. H. HOOPER, of Boston, stated that he had no personal experience with the operation, but had watched certain cases in the Boston City Hospital. Since last October ten cases of intubation have been operated on with two recoveries. In one case the attempt to introduce the tube caused spasm, and tracheotomy was performed. In every case there was immediate relief of dyspnea. In three cases the tube was coughed up and swallowed.

DR. D. BRYSON DELAVAN, of New York, said that an interesting question is with reference to feeding. It has been suggested that feeding with a tube introduced into the œsophagus would overcome the difficulty. This was worthy of consideration. This plan can also be used in cases of tracheotomy.

DR. MORRIS J. ASCH, of New York, thought there were a few objections which should be brought to the notice of the profession. One of these is that the membrane may be crowded down, which is very difficult to remove, even by tracheotomy. Another objection is the difficulty experienced by the ordinary practitioner in the removal of the tube.

DR. B. F. WESTBROOK, of Brooklyn, did not think that the weight of the tube is the cause of the trouble in deglutition, for the muscles which elevate the larynx are quite strong. It seems more likely that the difficulty is due to the rigid tube holding the larynx open. In normal deglutition the entrance of the larynx is closed.

DR. S. H. CHAPMAN, of New Haven, remarked that one of the most distressing symptoms after the introduction of the tube seems to be thirst. It would be interesting to study the cause of this. Could it not be relieved by the use of enemata and by baths? It may be occasioned by the use of the mercury, which might be introduced in some other way than by the mouth. The use of pilocarpin, which even in small doses causes salivation, might be of service.

DR. INGALLS said that it is so rare that the tube becomes clogged that it is not necessary to have a skilled attendant. When the tube becomes clogged it is usually coughed up, and, as a rule, it is not necessary to replace it for two or three hours. The attempt to

feed these patients through a tube introduced into the œsophagus has been tried in Chicago, but he had not heard any stress laid on this measure.

DR. J. SOLIS COHEN, of Philadelphia, then gave a

DESCRIPTION OF A MODIFIED LARYNGECTOMY.

The operation is applicable to those cases in which the disease is not too extensive, and has the advantage over complete laryngectomy of leaving the greater portion of the thyroid cartilage undisturbed while the respiratory portion of the larynx is removed. On the cadaver the operation can be performed in two minutes. In disease limited to the interior of the respiratory tube, especially carcinomatous disease, it fulfils every indication that prompted complete laryngectomy. The advantages claimed for the operation were: 1. Rapidity, ease, and comparative safety for the patient. 2. The small size of the wound. 3. The preservation of the attachment of various important muscles and ligaments. 4. The retention of important structures in their normal relation. 5. A firm natural support is left for the application of any artificial apparatus.

The operation should be preferred to complete laryngectomy, when not precluded by the extent of the disease.

PRESENTATION OF INSTRUMENTS.

DR. T. A. DEBLOIS, of Boston, exhibited a portable apparatus for compressing air.

DR. E. C. MORGAN, of Washington, presented a universal powder blower, which could be used in diseases of the nose, throat, vagina, or rectum.

DR. ALLEN exhibited an improved form of snare which could be used with one hand.

The following were appointed

THE NOMINATING COMMITTEE:

Drs. Beverley Robinson, of New York; W. C. Glasgow, of St. Louis; and S. H. Chapman, of New Haven.

AFTERNOON SESSION.

DR. JOHN N. MACKENZIE, of Baltimore, read a paper on

THE PATHOLOGICAL NASAL REFLEX: AN HISTORICAL STUDY.

The fact is established beyond doubt that a causal relation exists between diseases of the nasal mucous membrane and other portions of the respiratory tract and many conditions of distant parts of the body. Hay fever can be traced to the time of Galen. The fact that tickling of the nose would arrest hiccough is referred to by Plato. The irritating effects of the odor of flowers were recognized in very early times. Reference was made to the observations of various individuals in regard to reflex conditions due to nasal disease.

DR. JOHN O. ROE, of Rochester, then presented a paper on

HAY FEVER; ANALYSIS OF CASES, WITH RESULTS OF TREATMENT.

Up to the last hay fever season, the author had treated 42 cases. A study of these cases tends to confirm the opinions expressed in February, 1883. Some of these views have been modified. Of the 42 cases 26 were males and 16 females. The attacks came on between May 1st and August 1st. In all, the active symptoms

subsided soon after the appearance of frost. In some cases the hay fever dated from a severe attack of cold. In every instance there was disease of the nasal passages. The location of the sensitive areas is not constant but they are usually most marked over the areas of greatest hypertrophy. The areas have not been confined to the posterior portion of the turbinated bones nor especially to the anterior portion of the turbinated bones. In the majority of cases the septum was as sensitive as the turbinated bones. Thirty-one patients suffered with asthma. But twelve patients had a distinctly nervous temperament, while nine were distinctly phlegmatic.

The plan of treatment adopted is to restore the nasal passage to as nearly as possible a normal condition and destroy the sensitive areas. These areas are to be destroyed by cauterization. Deep cauterization has been more effective, while superficial cauterization had no marked effect. The condition of the larynx, pharynx, and bronchi must not be overlooked; not infrequently enlarged tonsils will keep up irritation in the turbinated bones. A neglect to cure a bronchitis may account for the return of the disease. 35 of these cases have practically been cured; 17 have remained exempt for periods varying from one to nine years; 4 were not relieved, owing to imperfect treatment; and 4 have been lost sight of. The following conclusions were presented:

1. All cases of hay fever have the initiatory lesion in a diseased condition of the tissue of the nasal fossa.
2. All diseases of these tissues induce in the ganglionic centres connected with them an abnormal activity which is reflected to other organs.
3. The sensitive areas in the nose are not found in any particular parts of the cavity. Nor are there any zones which, when irritated, produce always the same manifestations.
4. The direction in which the irritation is reflected is always in the line of least resistance. Irritation in the same region may be reflected in one direction at one time and in another direction at another time.
5. The disease in the nose may produce disease in other portions of the respiratory tract which may become independent centres of irritation.
6. The affection recognized as hay fever is due to local irritations brought in contact with the sensitive areas in the nose.
7. The affection is not *per se* neurotic; nor is the so-called neurotic condition of the person necessary to render a person susceptible to local irritation applied to the air-passages. It is not necessarily associated with the nervous temperament.
8. The neurotic condition, which is often regarded as the cause of the hay fever, is often the result of the local irritation.
9. By careful and thorough treatment of the disease of the nasal tissue, combined with that of other portions of the respiratory passages below, which have become secondary sources of irritation, we need not fail to cure hay fever.

DR. SAJOUS had reported at the last meeting some cases in which the use of the cautery had been of only temporary benefit. He now believed that the failure was due to the fact that the cauterization was only superficial. Since he had employed deep cauterization, he had cured the disease.

DR. MACKENZIE regarded hay fever as a neurosis. He did not believe that it is a disease of the nose producing reflex symptoms. Where in hay fever disease of the nose is found, the question arises whether this is primary or secondary, or whether it is only an accidental condition. There is, he thought, always some more central cause than the affections of the nose. Where the disease is recent, it may possibly be arrested by the rest given by local treatment; but where the affection is of long standing, he did not believe that simple local treatment of the nose will overcome the difficulty. Last summer, in treating hay fever, he made no application to the nose, and yet his results were better than ever before. He gave zinc, nux vomica, quinine, and arsenic in large doses.

DR. F. I. KNIGHT, of Boston, asked if any of the members had any experience with diversion of nervous influences in any of these cases? In one case coming under his notice, the attack was arrested by the patient breaking his leg. Another patient had the attack arrested after consulting a disciple of mind cure.

DR. W. C. GLASGOW, of St. Louis, held that the evidence shows that hay fever is not a local affection, but that it is a general nervous disturbance. It is difficult to judge of the influence of treatment, for in the same individual the severity of the attack varies from year to year. He believed that constitutional treatment is an important element in the case. Unless the disposition toward the disease can be eradicated, he did not believe that a perfect cure can be attained by the destruction of the mucous membrane of the nose.

DR. F. H. HOOPER, of Boston, had regarded hay fever as a neurosis, and had treated it in the manner spoken of by Dr. Mackenzie. This accomplishes great good, especially in young children. He had at present under treatment a case in which there is hay fever with asthma. Until this gentleman came to the speaker a few weeks ago, his nose had not been examined. In the right nostril there is a sharp ridge running along the septum, and coming in contact with the inferior turbinated bone. On the left side was a similar ridge. With this exception there was no special disease of the nose.

DR. SOLIS COHEN thought that the views of Dr. Mackenzie are very nearly correct. It had been his experience that poor people rarely become the victims of hay fever. He thought that, in addition to the neurotic element, coddling and high living had something to do with the induction of the affection. Many cases occur in those who are overworked, and have resort to stimulants. These patients are often benefited by rest in the mountains or at the seashore. He had obtained benefit by tonic treatment, modifying the diet and restricting the use of meat. The more we look upon this as a constitutional affection, and the less as a local condition, the sooner will we get at the truth. A large number of these sufferers have obstruction in the nasal cavities, but many have no such obstruction.

DR. ROE considered hay fever as the reflection of some irritation from the nasal chambers, which irritation is produced by some foreign substance coming in contact with the mucous membrane of the nose. Irritation reflected from other situations to the nasal chambers is not hay fever. He had never seen any evidence to show that this was a neurosis.

DR. DELAVAN read a paper on

THE TREATMENT OF ATROPHIC RHINITIS BY APPLICATIONS OF THE GALVANIC CURRENT.

Some years ago Dr. E. L. Shurly, of Detroit, recommended the use of the galvanic current in the treatment of dry catarrh of the pharynx and related cases in which benefit had followed its use. He also advocated the same treatment in atrophic rhinitis. There is no disease which is more discouraging to the physician and patient than atrophic rhinitis. Dr. Delavan has tried this method of treatment in certain cases. The positive pole of a constant current battery was applied to the nape of the neck, while the negative pole was applied directly to the mucous membrane by an electrode consisting of a copper wire around which absorbent cotton is wrapped. The strength of current employed varied from four to seven milliampères. In more recent cases of the affection the effect is marked, but even in the older cases the method is not without benefit. The author has found this measure useful in these cases and reported illustrations. The objection to the method is the amount of time which it requires.

DR. T. A. DE BLOIS has applied this method of treatment to two cases, one of atrophic and the other of hypertrophic rhinitis. In the first case there was almost complete loss of smell and taste. The applications were made three times a week for six months. Both cases were improved.

DR. KNIGHT asked what experience the members had had with the use of plugging the cavity of the nose. He had used this measure and produced relief of the most distressing symptoms. One side of the nose is thoroughly stopped with a piece of absorbent cotton, which is allowed to remain three hours during the morning. It is then removed and the other side is stopped in the same way for three hours in the afternoon. He never had the least disagreeable effects from the use of the cotton in this way. The bad odor is greatly lessened.

DR. ROE had used the plugs of cotton, but with no other effect than to set up irritation. He had used with marked benefit the application of a weak solution of nitrate of silver five or ten grains to the ounce, the parts having previously been cleaned. This applied every other day almost entirely relieved the symptoms.

DR. SAJOURS remarked that the good effect obtained by Dr. Delavan was probably due to the irritating effect of the negative pole. He had used in two cases with absolute relief of the symptoms the application of chromic acid in a solution made by simply allowing the acid to absorb moisture from the air.

DR. S. H. CHAPMAN, of New Haven, then made some remarks on

MYALGIA OF THE PHARYNX AND LARYNX,

and called attention to certain peculiar conditions of the muscles of the upper air-passages, which occur oftentimes in malarial disorders and which on account of their severity are brought to the notice of the specialist. The muscles most likely to be affected are the pectoral, the muscles of deglutition, and those of the voice.

DR. F. I. KNIGHT, of Boston, opened the discussion on

SENSORY AFFECTIONS OF THE THROAT.

His principal experience has been with hyperæsthesia

and paræsthesia. In hyperæsthesia the general condition of the patient is, as a rule, not sufficiently considered. The worst cases are alcoholic subjects and those with digestive disorders. These will often yield to withdrawal of the alcohol and regulation of the diet. Astringents are frequently of service. In the cases of paræsthesia which he had seen, there had been a feeling of fulness, pressure, burning, globus hystericus or the sensation of a foreign body in the throat. In these cases there is impairment of the general nervous system. The exciting cause may be some disease of the throat. Fatigue usually exaggerates these sensations. He had never met with paræsthesia of the larynx as the earliest symptom of phthisis, as had been claimed by some observers. The prognosis in most cases of paræsthesia is good if a careful treatment be carried out. The treatment of the neurosis of sensation must be aimed to cure the constitutional vice.

DR. W. C. JARVIS, of New York, recently saw a man complaining of pain on either side of the tongue which had existed for the past two years. He was suffering from the effects of syphilis and with the neuralgia of the tongue there were frontal neuralgia and pains in other parts of the body. The speaker has another patient who consults him every five or six months on account of a severe pain in the right anterior pillar of the fauces. He believes that it will terminate in cancer. It disappears for a week at a time and then returns. He believed that in this case the trouble is psychical and that there is no pathological lesion to account for it.

DR. SAJOURS has seen two or three such cases. In one there was follicular pharyngitis, and although the pathological condition was cured the pain remained. The pain seemed worse in damp weather and the patient had the habit of bathing every morning in cold water. The history of the case seemed to indicate a rheumatic trouble and such may have been its nature.

DR. GLASGOW said that many of these cases, he thought, were due to malaria and some to the gouty diathesis. Sometimes the trouble is kept up by a single hyperæsthetic follicle. A reduction of the inflammation will be followed by a subsidence of the neuralgia. Sometimes the source of irritation is found with difficulty. In the rheumatic cases there is usually exacerbation at night. These affections in some cases appear to have a tendency to the induction of melancholia.

FRIDAY, MAY 27TH.—MORNING SESSION.

DR. FRANK DONALDSON, JR., of Baltimore, reported some

FURTHER RESEARCHES UPON THE FUNCTION OF THE RECURRENT LARYNGEAL NERVE.

At a previous meeting he had read a paper criticising certain conclusions advanced by Dr. F. H. Hooper, of Boston. The conclusions which Dr. Donaldson reached were, that the constrictors do not cease to act under deep narcosis or suspension of consciousness from any cause; that we do not always obtain abduction on irritation when consciousness is suspended; that the abduction was not reflex and was not dependent on unconsciousness; that it is with weak stimuli that abduction takes place, and the movement passes into adduction as the stimulus is increased. These results invariably followed whether the animal was slightly or

deeply narcotized, or where the medulla was destroyed, or when local death had taken place; that after strong or continued stimuli the abductor muscles became worn out and did not respond to stimuli.

These conclusions had been strongly criticised, and the present series of experiments were performed to test the correctness of the above views. He had shown that abduction of the vocal bands can be obtained without ether, and that it is a physiological fact that opening or closing of the larynx depends upon the strength of the stimulus. With weak stimuli abduction was produced, while with strong stimuli adduction was caused.

DR. F. H. HOOPER, of Boston, then read a paper on

THE ANATOMY AND PHYSIOLOGY OF THE RECURRENT LARYNGEAL NERVE.

He said that the anatomy of this nerve is now complete and exact, but up to a very recent date much confusion existed on this subject. To find out why these nerves are recurrent, it is necessary to begin with the embryo. The recurrence is due to certain changes in the branchial arches and the descent of the heart into the thorax. At one time in the period of development, these laryngeal nerves are straight, but as the heart descends they are brought down. The proof of this is found in the abnormal condition of the nerve in cases of irregularity of the great vessels which branch from the aorta. These nerves (at least in dogs and cats) contain no sensory fibres.

The larynx possesses three functions controlled by three distinct sets of muscles, all innervated by the recurrent nerves. These functions are: 1. Respiration; 2. Sphincter action, which closes the larynx and prevents the entrance of foreign bodies, and plays an important part in expulsive acts; 3. Phonatory action.

Stimuli applied to recurrent nerves produce adduction in certain animals (dogs), and abduction in other animals (cats). Only a few experiments have been made in man, but, as far as they go, they seem to show that stimulation closes the glottis. Under ether or profound morphia narcosis, stimulation of the recurrent nerves produces opening of the glottis in dogs. Three hundred and twelve experiments were reported; some of the animals were under the influence of chloral, chloroform, morphia, or ether. Under ether, dilatation was produced with weak currents, while contraction could not be produced with even the strongest current. As the dog begins to come out of the ether, dilatation cannot be induced with any current, while contraction is brought about by currents decreasing in intensity as the effect of ether passed off. A similar effect was observed in one case after the use of a large dose of morphia. After small doses of ether stimulation produces two effects, first vibration, second closure. Under large doses of ether four effects were observed, according to the intensity of the irritation—vibration, complete dilatation, mixed movement, and closure. After small doses of morphia, chloral, and chloroform, stimulation produces the same effects as after small doses of ether.

DR. KNIGHT said that such different results are obtained in different animals, resulting from differences in size, weight, and other conditions that they must be ap-

plied with a great deal of reserve to the human being. He saw some of the experiments of Dr. Hooper. In one case he saw a failure to get the ether effect, which was attributed to the size of the dog.

DR. S. W. LANGMAID, of Boston, said that in one of Dr. Hooper's experiments recently made, the skull was trephined and insensibility produced by pressing a plug against the cortex. In this case dilatation was very marked under stimulation of the recurrent nerve. That was the only case in which he had seen dilatation similar to that which he thought Dr. Donaldson described. In some cases he found it difficult to say exactly what he did see.

DR. M. ALLEN STARR, of New York, recently had an opportunity to see in Paris some experiments by Charcot on hypnotized individuals. It is well known that in this state slight percussion of a nerve will produce contraction in the muscles supplied by that nerve. In one of these cases, slight stroking in the course of the recurrent laryngeal nerve over the trachea below the larynx, produced such adduction of the vocal cords, and so interfered with breathing, that it became a question whether it would not be necessary to resort to tracheotomy.

DR. HOOPER said that he had been trying to get the effect with feeble stimuli which Dr. Donaldson described, but had been unable to do so. The only point on which they disagree was with reference to the effect of weak stimuli in unnarcotized animals. He had done a number of experiments following the method of Dr. Donaldson, but had not gotten his results.

AFTERNOON SESSION.

DR. WILLIAM C. GLASGOW read a paper on

CERTAIN MEASURES FOR THE RELIEF OF CONGESTIVE HEADACHES.

The most severe symptoms in this condition are the pain and sense of constriction of the forehead. If the pain is analyzed, it will be found that it is of two kinds. One gives a dull sense of fullness and occasional throbbing over the temple. The other is of the sharp, lancinating character so generally known as neuralgia. At times both of these varieties are present in the same case. In the one there is fullness of the vessels, and in the other disordered nerve action. Both varieties are often due to the same pathological condition of the nasal chambers. During congestive headache, if we examine the nose we find that the cavernous bodies are full and tense. The degree of tenseness corresponds, to a certain extent, to the degree of headache. The method of treatment which he had adopted during the past four years had been the local abstraction of blood. A knife is not required, a simple prick is sufficient. In many cases the relief is immediate. The operation may have to be repeated in a month or two. He had seen few cases in which permanent relief had not followed a repetition of the operation from two to six times. The amount of blood drawn rarely exceeds an ounce. A number of illustrative cases were cited.

DR. MACKENZIE stated that the paper goes to prove certain views which he had advanced with reference to turgescence of the turbinated bones during the menstrual periods. He thought that a number of headaches occurring during menstruation are due to congestion of

the turbinated bones. Some years ago he advised that in acute coryza an incision be made in the turbinated tissues with a sharp-pointed bistoury.

DR. C. C. RICE, of New York, said that his experience was somewhat different from that of the author. So far as chronic hypertrophic catarrh is concerned, he had come to look in the cases of headache for hypertrophy over the middle turbinated bone, pressing against the septum. He had seen many such cases; there had not been much congestion, but simply contact. In these cases he had used the galvanic cautery, and had not tried to draw blood. He thought that it is sufficient to cause counter-irritation without bleeding.

DR. HARRISON ALLEN, of Philadelphia, was more in accord with the last speaker than with the author. The trouble may come from the turbinated bones, but he had attributed it to pressure effects. We know that when the septum is deviated it is usually with the convexity to the left, but if a careful examination is made, it will be usually found that there is in the upper part a deviation in the opposite direction. This brings it in contact with the middle turbinated bone. The proper treatment is to separate the parts. He does not hesitate to etherize the patient, and introduce the finger and push the septum into place. In one case, a lady came to Philadelphia with a complication of disorders. There was astigmatism, and also a lacerated cervix. She was under the care of an oculist and of a gynecologist. Each of these gentlemen attributed the trouble to the condition belonging to his special department. She had reflex headaches which were so severe as to lead to a fear of mental aberration. On examining the nose he found the condition referred to above, and insisted that the headache was due to the trouble in the nose. He etherized the patient and separated the parts with the finger. The headaches entirely disappeared.

DR. SAJOUS said that while the lesions described by Dr. Allen may be found in a number of cases, he was more inclined to consider headaches originating in the nose as due to hyperæsthesia. He thought that this is proven by the effect of light cauterization, and the treatment of Dr. Glasgow also goes to show that by depleting the cavity he reduces the stretching and pressure on the nerves, and therefore reduces the hyperæsthesia.

DR. F. H. BOSWORTH, of New York, remarked that it is a fact that in many cases where we find contact between the middle turbinated bone and the septum there are no symptoms that can be referred to this condition. Judging from analogy, we have in no other portion of the body neuralgia caused by the contact of mucous surfaces. In the vagina and in the urethra we have mucous surfaces in contact. We may, however, safely say that it is a proper course to pursue to put the nasal cavity into a condition as near normal as possible.

DR. GLASGOW remarked that his paper said nothing at all about hypertrophy. No one recommends bleeding for hypertrophies, for these do not bleed. The fulness of the cavernous sinuses is simply the sign of the fulness of the frontal sinuses. He did not regard it as the cause of the trouble. He takes blood from this part simply because this is the most convenient place to do it.

(To be continued.)

AMERICAN SURGICAL ASSOCIATION.

Annual Meeting, Washington, D. C., May 11, 12, and 13, 1887.

(Specially reported for THE MEDICAL NEWS.)

(Continued from page 611.)

FRIDAY, MAY 12TH—THIRD DAY.

MORNING SESSION.

The following surgeons were elected to membership: Charles B. Porter, M.D., of Boston; William M. Mastin, M.D., of Mobile; and Morris H. Richardson, M.D., of Boston.

The Committee on Nominations reported the following list of

OFFICERS FOR THE ENSUING YEAR.

President.—D. Hayes Agnew, M.D., of Philadelphia.

Vice-Presidents.—N. Senn, M.D., of Milwaukee,

F. S. Dennis, M.D., of New York.

Secretary.—J. R. Weist, M.D., of Richmond, Indiana.

Recorder.—J. Ewing Mears, M.D., of Philadelphia.

Treasurer.—Phineas S. Conner, M.D., of Cincinnati.

Member of Council.—John S. Billings, M.D., of Washington.

DR. L. McLANE TIFFANY, of Baltimore, read a paper on

SURGICAL DISEASES OF THE WHITE AND COLORED RACES COMPARED.

He stated that the present paper was intended to be only preliminary in character. The statistics presented were prepared from the records of 4930 surgical cases, most of them derived from out-door patients, but some of them were also traced into hospital. Of the 4930, 64 per cent. were white, and 36 per cent. negro. Included among the negroes were also mulattoes. He had observed that, while there is a considerable difference between the whites and the black negroes, in their behavior in disease, this difference was subject to gradations corresponding to the gradations of color.

Most of his observations were presented in tabular form.

The two races were subject to the following diseases in the percentages annexed.

	White.	Negro.
Abscess	57 per cent.	43 per cent.
Alveolar	45 "	55 "
Axillæ and neck	44 "	56 "
Hand		
Fingers }	75 "	25 "
Paronychia }		
Enlarged glands		
Neck }		
Axilla }	41 "	59 "
Groin }		

Pus formations are exceedingly likely to occur in the negro. In syphilis, early adenopathy, sometimes huge masses form in the groin, and these often suppurate. Chronic syphilitic suppurations are often encountered, but less frequently than scrofulous ones.

The following table illustrates the frequency of the diseases named:

	White.	Negro.
Ganglion	83 per cent.	17 per cent.
Bursal enlargements	77 "	23 "
Hydrocele	94 "	66 "

	White.	Negro.
Frost-bite	44 per cent.	56 per cent.
Fistula in ano . . .	71 "	29 "
Hemorrhoids		
External	64 "	36 "
Internal	82 "	18 "
Spinal caries	47 "	53 "

Spinal caries is most frequently located in the dorsal region of the negro. Cured Pott's disease in the middle aged negro is very rare.

Dislocations are more frequent in the white, as is illustrated by those of the humerus, 82 per cent. white, 18 per cent. negro.

Lateral curvature of the spine is more frequent in the white.

Keloid is characteristically more frequent in the negro than in the white, and presents certain differences of appearance. In the white it is frequently seen in middle life, and frequently commences at puberty. In the negro it typically belongs to adolescence. It is at first smooth, becomes seamed, is not painful. It commences in the skin, may be spontaneous, but is usually from a scar, following slight injuries, as ear-puncture. It is liable to retrograde metamorphosis, and exhibits slower growth with advancing years. In this regard he thought the tendency to keloid formations disappears in later life, and that its removal is then permissible.

Lipoma is most frequent in the negro; sebaceous cyst more frequent in the white (88 per cent.); nævus also more frequent in the white.

Carcinoma has been more frequently encountered in the white. The essayist had never seen an epithelioma of the lip or any part of the face in a negro. Osteosarcoma is, however, frequent in the latter. The pure ovarian cyst is more frequent in the white, but fibromata or adeno-fibroma is much more frequent in the negro.

Gonorrhœa, acute, 50 per cent. white; chronic, 62 per cent. white. It seems not to give the negro much trouble. Epididymitis was encountered in the white in 59 per cent. Gonorrhœal rheumatism is rare in the negro. Chronic urethral discharges were frequently encountered in the negro, which had not been paid attention to and cared for. Inflammatory gonorrhœa was rare in the negro. Carter and McIntosh (*New York Medical Journal*, No. 13, 1886) think stricture rare in the negro as compared with the white, giving the percentage as 1 to 8 in the white, and 1 to 23 in the negro.

Bubo, chancroidal, 49 per cent. white, 51 per cent. negro; gonorrhœal, 37 per cent. white, 73 per cent. negro. Inflammatory phimosis was in the proportion of 27 per cent. white, 73 per cent. negro, usually chancroidal, frequently of the preputial orifice. Rachitis, 37 per cent. white, 63 per cent. negro.

In hospital he observed that the negro bore operations well—better, as a rule, than the white—but their reaction after accidents was not so good as that of the whites.

In conclusion, he offered the following suggestions:

1. Surgical affections pursue different courses in the white and colored races under identical hygienic surroundings.

2. Surgical operations and injuries are better borne by negroes than by whites.

3. Surgical diseases involving the lymphatic system,

especially tubercular, are more fatal in negroes than in whites.

4. Congenital deformities are more rare in negroes than in whites.

5. Surgical differences observed between negroes and whites are due to racial peculiarities.

DR. CHRISTOPHER JOHNSTON agreed with the conclusions in general, but added that there are individual peculiarities that are as great as any others. He also had observed that the negro bore surgical operations better, and required less hospital treatment, than the whites. He had never observed carbuncle in the negro. He had, however, observed epithelioma in a few cases; the first penis he ever amputated being that of a dark negro for this disease. Fibromata are more frequent than in the white race. Keloid, also, is characteristically prominent in the negro. The skin and lymphatic tissues are more liable to disease than in the white race.

DR. T. G. RICHARDSON briefly sketched the records of a few diseases in the New Orleans Hospital. Of 28,090 cases, more than 8000 were colored. The diseases appeared the following number of times in each race:

	White.	Negro.
Abscess	187	96
Erysipelas	177	49
Cancer	140	69
Epithelioma	83	30 ¹
Tetanus	27	15
Epilepsy	135	46
Aneurism	112	29
Internal hemorrhoids	66	8
Fistula in ano	75	12
Stricture of the urethra	123	85
Diseases of the bladder (general)	86	55
Coxalgia	38	10
Cutaneous diseases in general	181	41

He omitted syphilis, for the reason that he could present nothing of value; since syphilitic negroes were not provided with a separate ward, and were treated for the most part at home. He could corroborate the statements of Drs. Tiffany and Johnston that it is rare to find congenital deformities in the negro. He concluded by calling attention to the fact that his statistics gave only the number of cases treated without taking into consideration the relative proportion of each race.

DR. E. H. GREGORY considered it a striking contrast that pus formation is so frequently associated with syphilis in the negro. His experience might not correspond with that of others, but he has very seldom found pus formed in connection with the local manifestations of syphilis, and he has never regarded a suppurating local lesion as syphilitic in character. He has always been accustomed to regard such a lesion as local, and not as an evidence of constitutional infection. He agreed with Dr. Tiffany, that the most extraordinary examples of keloid that had come under his observation have been in negroes. He had never seen multiple keloid in the white, whereas it is common to find several of these tumors in the negro. Nor had he seen a keloid as large in the white as in the negro. The point that the disease is less likely to form after middle life was new.

The inference to be drawn from Dr. Tiffany's paper is that the negro is below the white man, that he is not

¹ Very few of face.

a standard organism. If it be a fact that the negro is more apt to produce pus, it follows that his resistance to the incursions of disease is less than that of the white man. He assumed that all strumous disease is due to the presence of a microorganism, usually being associated with tubercle. Now it is the weakest of all organisms that will entertain the bacillus tuberculosis, the weakest of all microorganisms. It always seemed to him that the reparative process is in proportion to the energy of the body, and whenever we lower the scale of the organism, our reparative processes are relatively feeble; but if the negro have stronger power of resistance, he did not see how he can be more liable to these diseases. It may be harder to persuade the negro that he is sick. The indifference of the negro may play some part here. The negro cannot be supposed to form any adequate idea of the magnitude of a surgical operation, as it would appear to a white man. In this way we may account to some extent for the fact that he stands surgical operations better than the latter.

He had never seen a cancer on the lower lip of the negro, and thought it singular that stricture of the urethra is uncommon in the negro; whereas he had frequently thought certain strictures partook of the nature of a keloid formation, which is of acknowledged frequency. He had never seen a ganglion in the negro, although they are common in the white man.

From an examination of the records of the hospital in St. Louis, he had arrived at the conclusion that the negro bears surgical operations about as well as the white man, but he could not say that he had any advantage in that regard. Negroes are tubercular, and mulattoes are even more exposed to the disease than the black negro, so that they ought to make the worst subjects of surgical operations.

DR. W. T. BRIGGS had prepared no statistics on the subject, but his experience confirmed in a remarkable degree the statistics of Dr. Tiffany. The negroes in Memphis, he added, live mostly in little low cabins; they live on the cheaper articles of diet, eat enormously, and consequently, it is not remarkable that they are of a lower degree of vitality than the whites, and that they are subject to scrofula. It is seldom that a negro is not the subject of a scrofulous diathesis. They are, therefore, more subject to suppurations; almost any occasion will give rise to a suppuration. Nearly all operations will have a suppurative action; and sometimes they are very prostrating. Negroes bear a surgical operation probably better than whites, the mere operation itself, because they can have no appreciation of the magnitude of an operation, or the dangers to them; nor do they care much as to the result. They have more religion than white men and are not so much afraid to die. When in the hospital they are better off than at home, and do not care to get out, and for this reason their convalescence may be longer. Their temperature seldom rises so high as that of the white man, but that they recover as rapidly as the latter, he did not believe. In regard to malformations, while he did not think that they are so frequent in the negro, yet he had met with all kinds of malformations; he had seen half a dozen club-feet in the negro, and he has operated upon the negro for harelip. Spina bifida he had seen on several occasions; hydroceles do occur; the first case he operated upon was in a negro, and was of enormous size,

reaching almost to the knee; and he sees a case, on an average, once a year. Keloid is common, and if removed returns twice as large. Cancerous affections are not as common as in the whites. Lupus of the face is frequent, and is frequently seen upon the penis also. Uterine fibroids are very common in the negro, and the greatest number of tumors in the negro race belong to that class—fibroids or fibro-cystic tumors. He had twice a typical ovarian tumor in a negro.

DR. D. W. YANDELL agreed in almost every particular with the remarks of the previous speaker, but he had never seen keloid in the white man. Epilepsy is exceedingly rare among negroes. Tetanus is exceedingly common. He had never seen a case of internal hemorrhoids, and only two cases of fistula in ano. Livingstone, in his travels in Africa, as the speaker had been informed by President McGuire, reports no hemorrhoids and no dyspepsia among the Africans. He thought the latter statement correct, because they can eat anything and everything, and are always ready to eat. Stricture of the urethra, in his experience, was exceedingly common.

DR. KINLOCH desired to call attention to two points: first, the liability of the negro to suppuration, and, second, his power to undergo operations and recover from them. He thought it a mistake to class all negroes together in regard to the liability to suppuration. It is difficult to separate the negro from the hybrid mulatto. He differed from some of the speakers with regard to the liability of the pure negro to suppuration, for he thought this liability much less than in the white man. He did not think that the pure negro is as strumous as the mulatto, nor that the former is affected with the extremes of syphilitic disease; the poison seems to die out more readily in them. The mulatto, on the other hand, is almost always strumous; we constantly see them in our hospitals with suppuration in the glands of the neck and groin. Syphilis rarely ends with them, but passes on and becomes mixed up with struma, and it is difficult to say whether you are treating syphilis or struma. The negro, he thought, recovers well. This is in part probably owing to the character of his nervous system. The negro is more apathetic, as Dr. Briggs has said, and has not to contend with the peculiarly depressing influences on the nervous system.

DR. A. VANDERVEER stated that his experience in connection with the Albany penitentiary, where a large number of negroes were received from the South as government prisoners, was that the vast majority of these who died, succumbed to some form of tuberculosis. Of those who come and are examined at the time, many are found to have soft chancre and the suppurating bubo which accompanies the chancre is slow to heal; but when they get a true Hunterian chancre, they present the true bullet bubo, which compares well with that of the white race. There is a much greater number of perineal abscesses after urethral strictures than in the white, but when they are operated upon there is a less percentage of urethral fever, and they generally recover well.

DR. L. McLANE TIFFANY thought that it should be remembered that the true negro is at present very seldom seen. The difference between the resistance of the true negro and that of the mulatto is well illustrated in the teeth. The negro seldom loses his teeth, but the

mulatto has teeth of no resistance at all. Studying the peculiarities of the negro race, he said, is a sort of laboratory work. It is at present a question, what soil is best suited to the cultivation of the infectious organisms. Just as in the laboratory we learn what soil, whether gelatine, potato, bouillon, or what not, is best suited to the cultivation of a particular germ, so we must ascertain what race is most susceptible to the growth of peculiar germs.

DR. B. A. WATSON then related

AN EXPERIMENTAL STUDY OF THE EFFECTS OF PUNCTURE OF THE HEART IN CASES OF CHLOROFORM NARCOSIS.

(See page 619.)

DR. N. P. DANDRIDGE remarked that the interest in such experiments as these is the practical deductions we can draw from the investigations on animals to man, and here he thought we should be exceedingly careful not to apply too freely these deductions; for the conditions which present in the human being under chloroform are very different from those in the animal under experimentation. In animals the anæsthetic is pushed purposely to a dangerous degree; in some instances the anæsthetic was given at first in a fatal dose. The accidents which happen with chloroform very often occur when only a small amount of chloroform has been taken—in the beginning of the giving of chloroform and before the operation has commenced—the result being probably due to its inhibitory action on the heart.

It appeared to him that there was one point in which the experiments did not illustrate fully what was desired, and that was the question how long after the failure of the heart the puncture will stimulate the cardiac action. It is not at all unusual in cases of accident with anæsthetics, for recovery to take place after apparently fatal failure of the heart's action has occurred, without the adoption of any such measure as that referred to in the paper. If in the experiments the puncture has been successful after the lapse of five or ten minutes, the result would have been much more valuable. In the paper presented by Dr. Senn on "Air Embolism," a few years ago, it was shown that in animals in which there was impending death from the introduction of air into a vein, a certain number could be relieved by direct aspiration of the right auricle, provided it was done rapidly, and provided the amount of air was not excessive. The object of his experiments, however, was to relieve distention and not simply to stimulate by the traumatism the muscular fibres of the heart. With reference to the comparative safety and efficiency of puncturing the right auricle and the right ventricle, he thought that in the human subject it would be much easier as well as safer to puncture the auricle.

Further, the comparative availability of this measure with artificial respiration, the inhalation of the nitrite of amyl, and the hypodermatic injection of the sulphate of atropia should be carefully considered. The preliminary injection of morphia and atropia has, he thought, a particular influence in the prevention of heart failure.

DR. JOHN B. ROBERTS thought the paper instructive in two directions, one intentionally instructive, the other, perhaps, unintentionally so. Dr. Watson has shown the stimulating effect of puncture of the heart, especially if the ventricle be struck; he has shown, also, the almost

constant possibility of producing death by the inhalation of chloroform. In his experiments he has shown not only that the stimulating action is greater if the ventricle be punctured, but that the danger is less. That puncture of the auricle would be more dangerous would be naturally supposed from the fact that its walls are much thinner than those of the ventricle, and consequently less likely to prevent the extrusion of blood.

The point raised by Dr. Dandridge, that in these experiments a large quantity of chloroform is given, whereas in the human subject only a very small quantity is often given, led him to take rather the opposite ground, for he thought the measure would be more likely to prove successful in man under a small amount of the anæsthetic than it would in dogs under a large amount, provided dogs and men are susceptible to the same treatment. The paper of Dr. Senn was *à propos* in this connection, inasmuch as that author found that the withdrawal of blood from the heart cavity stimulated its action. With reference to the injection of atropia in chloroform and ether narcosis, he thought that there could be no doubt as to the drug being a cardiac stimulant, but its physiological action is slow, probably more so than that of digitalis. Reference was also made to the experiments of Westbrook on the human subject under the idea that he could probably relieve the engorgement of the heart by withdrawing blood. The speaker was particularly gratified to hear Dr. Watson say that it is safer to puncture the ventricle than the auricle, for Dr. Westbrook had taken the ground that the right auricle could be more safely punctured than the right ventricle, which seemed to him erroneous.

DR. L. McLANE TIFFANY thought the record of experiments was open to marked criticism. First, it is well known that the dog under chloroform behaves in such a peculiar manner, that for experimental work in laboratories chloroform is never used. The dog behaves absolutely differently under chloroform from the human being. It is not, therefore, proper to make deductions from the dog to the human being. Another point was with regard to the conclusions adduced by the experimenter, that it was advantageous to puncture the heart in chloroform narcosis; but whether it was the heart of a dog or that of a human being was not stated. If the human heart was meant, he could not agree with Dr. Watson. It is very different to do a thing in the laboratory and advise others to do it in practice from actually carrying it into practice.

DR. R. A. KINLOCH had punctured the heart in a case of chloroform narcosis. He was about to operate upon a patient for diffuse abscess of the skull. Instead of using the "A.-C.-E." mixture as was his custom, his assistant anæsthetized the patient with chloroform. It was seen that the patient was about to die. All the usual expedients were resorted to, but the patient appeared to be dead. An assistant suggested puncture of the heart. The ventricle was twice punctured. No effect was observed. A long hypodermatic needle was used.

DR. W. A. BYRD called attention to the combination of bromide of ether, chloroform, and ether which he had been using. Only a drachm or two is required to produce anæsthesia, and he had used it many times with no bad symptoms.

DR. THOMAS J. DUNOTT, of Harrisburg, reported a

case in which the heart had been twice punctured. The first puncture was made for the removal of pericardial fluid. The case was one of dilated heart, with general dropsy, œdema of the lungs, etc. The patient fell into the hands of some irregular practitioners. They borrowed an aspirator from a neighboring surgeon and aspirated the patient. They stated that they had withdrawn a large amount of fluid from the pericardium, which immediately coagulated; but it was otherwise learned that the fluid was pure blood. The patient seemed benefited by the operation and recovered. Subsequently, however, the operation was repeated, and the patient died.

DR. WATSON, in closing the discussion, replied first to the remark of Dr. Dandridge, that there was no clear statement in the paper as to how long after the cessation of the heart's action remedial aspiration may be accomplished. The experiments, as read by him, on the contrary, show that he had repeatedly excited the action of the heart three minutes after its cessation. In one instance he had punctured four minutes after and got no response. It is quite certain that vitality remains and that there is a certain irritability that remains for a certain period, possibly not a fixed period after cessation of the respiration; but to determine this period would require a vast number of experiments.

With reference to the puncture of the right auricle and ventricle, he had arrived at two conclusions. First, the walls of the auricle are very much thinner; there is much less muscular tissue to be irritated. It is in every sense the reservoir of the heart. The propelling power resides in the strong muscular ventricles. There is another reason for not puncturing the right auricle; because, since the walls are thin, the puncture endangers the life of the patient from the consequent leakage. The needle, when left in the walls of the ventricle, does not produce laceration, but it does so if left in the thin walls of the auricle; and he thinks the same occurs when the auricle is punctured. There is no leakage from the right ventricle, or, if any, it is from the cardiac veins, and not of any consequence. The main hemorrhage from the cardiac veins was in his experiments comparatively trivial; with regard to the difference between the action of chloroform upon the animal and the human being he was familiar. The difference, however, is all in favor of the man, and not of the dog. Chloroform cannot be continued as an anæsthetic any length of time in the dog. At a former meeting of the Association he had shown that when attempting to make some experiments under chloroform, half his dogs were lost. The same pathological conditions are found when chloroform is used upon the dog, as when it is used upon man. It is found constantly that the heart is in diastole, and that the veins of the lung are engorged, unless previous hemorrhage have taken place.

Now the object of the heart puncture, he continued, is twofold: First to irritate the muscles and cause contraction. He thought that his paper would lead to the conclusion that the puncture does, by its irritation, cause muscular contraction. Now you may have muscular contraction still taking place, but if the heart is distended with blood, and if the heart does not contract strongly enough to propel this column of blood what occurs? The heart becomes paralyzed. Now he thinks

that in addition to puncturing the heart it is advisable to enter the ventricle and withdraw some blood. The walls of the heart are paralyzed by overdistention, just as occurs when the walls of the bladder are paralyzed by overdistention. The experiments showed better results when he succeeded in withdrawing some blood, than when he simply punctured the ventricle.

With regard to atropia, he expressed greater confidence in a needle thrust into the heart than in atropia. The rapid use of chloroform, he added, does not produce the most favorable condition of the animal for resuscitation. Professor Sayres believes that chloroform should be given rapidly, by excluding all atmospheric air. His experiments showed that in two instances, where chloroform was thus given, the heart's action continued a little longer than respiration; and that when it was cautiously given, he found that in every instance its action was more uniform, and that it did not kill the animal so quickly. Sometimes in experimenting on dogs one finds that the animal dies suddenly after having taken only a very small amount of chloroform, while in other instances a large amount is required. In one instance the animal breathed eight minutes after the cessation of the heart. The dog could be aroused two or three minutes after the heart ceased to beat. It is better, therefore, to give chloroform cautiously, and with an abundance of atmospheric air. In the first forty experiments he had determined to kill the dog as quickly as possible; while, in the latter, he was not so rapid with the anæsthetization, and he had resuscitated six of the last twenty dogs.

(To be concluded.)

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, May 19, 1887.

THE PRESIDENT, A. JACOBI, M.D., IN THE CHAIR.

DR. L. EMMET HOLT read a paper on

SPONTANEOUS ABSORPTION IN EMPYEMA IN CHILDREN, AND THE RELATIVE ADVANTAGE IN CHILDREN OF ASPIRATION AND EARLY INCISION.

He said that more than one-half of all cases of empyema occur in subjects under ten years of age. The prognosis, however, is better at this than any other period of life; there being different causes in the different classes of cases. Spontaneous absorption may possibly occur, but it is exceedingly rare, and he had been able to find but two cases of this on record in which the diagnosis was verified by the test of the hypodermatic syringe. Formerly, evacuation through a bronchus and an external opening had been regarded as the most favorable termination of the condition, but he had not succeeded in finding much definite information in regard to its frequency or results. Pneumothorax, he believed, is very rarely produced in children. On the whole, it is evident that the chances of recovery by means of nature's unaided efforts, are extremely small.

Having remarked that empyema is in reality nothing but an abscess with the peculiarity of having its outer wall rigid, and its inner wall yielding, he said that the indication for treatment is to try to get rid of the pus in the easiest and safest manner possible, and that the

only methods which he should discuss were those of aspiration and free incision. The advantages claimed for aspiration are: (1) simplicity; (2) freedom from danger; (3) that it does not remove the fluid rapidly; (4) that it does not require general anæsthesia; (5) that it does not require the confinement of the patient to bed; and (6) that many cases are cured by aspiration alone. As a matter of fact, he said, these alleged advantages, with the exception of the last, are not superior to those possessed by incision. Of 121 cases of aspiration collated by him, 23 cases, or 19 per cent., were cured, and 6 died. The remainder were subjected to other methods of treatment. In all but one of the 21 successful cases the empyema was localized, and in 8 a single aspiration was sufficient to effect the cure.

Aspiration has many obvious objections, and among them are the following:

(1) The entire quantity of fluid cannot be removed by this means. (2) Where septa exist in the pleural cavity, but one division of the latter may be evacuated. (3) The terror excited in children, especially when the aspiration has to be repeated a number of times, constitutes a serious obstacle to its success. (4) There are certain cases in which aspiration is not available, and if the case is allowed to go on for a considerable time without evacuation, septicæmia, and other dangerous consequences, are likely to ensue.

Among the advantages of incision are, first, its universal applicability, and, secondly, the fact that it enables the surgeon to explore the pleural cavity thoroughly. While the exposure of the cavity and the admission of air were formerly well-founded objections, since the introduction of antiseptics this is no longer the case. As to the use of general anæsthetics, Dr. Holt said that in two instances he had seen death result from this cause, in consequence of the rupture into a bronchus. He had never known of this untoward result to occur in children, but these cases ought to be sufficient to warn us against the employment of general anæsthetics when emphysema is present. He did not know whether local anæsthesia by cocaine had been resorted to in this connection, but he should suppose that this would answer every purpose.

Considering the results that were met with, it is no wonder that a low estimate was entertained of the operation by the older surgeons, and Dr. Holt quoted the opinion of Sir Astley Cooper and others, whose experience led them to regard it as almost necessarily fatal. He had collected 59 cases in children, performed at a later period, but before antiseptics had come into as general use as at present, in which there were only 8 deaths. Out of 63 cases in which the operation was performed with strict antiseptic precautions, however, there were but two deaths, and he thought that no more complete evidence could be furnished of the advantage of antiseptics than this. As to duration, out of 80 cases in which antiseptics were used, 5 cases lasted four months, or more, and in the remaining 75 the average duration was six weeks. In 21 the duration was one month, or less. In cases in which antiseptics were not employed, the average duration was six months.

The conclusions at which he had arrived were as follows:

(1) All methods yield better results than non-interference. (2) A case should never be left to the unaided

efforts of nature. (3) Aspiration holds out a possible chance of cure. (4) If, after two aspirations, the fluid continues to accumulate, this method should not be persisted in. (5) In large effusions, it is well to make one aspiration before resorting to incision. (6) In all other cases a free incision should be made, preferably under local anæsthesia.

Finally, he said, no better guide could be observed than that contained in the words of Wagner: "Early incision, perfect drainage, and complete antiseptics."

DR. F. HUBER read a paper on

ACUTE EMPYEMA IN CHILDREN.

He claimed that no medicinal agent has any effect in producing absorption, but symptomatic and palliative remedies are of service, and it is important that the patient should be placed in the best hygienic surroundings possible. As regards surgical interference, the more promptly this is made, in general, the better will be the results obtained; provided it is not during the first few days of the attack. As a rule, he had found it better to wait until a week or ten days had passed, so as to allow the acute febrile symptoms to subside, and give the patient a chance to rally. After this judicious delay, aspiration might be tried first; the hypodermic needle having been previously inserted at the point where the aspiration was to be made, in order to be sure of the presence of pus in this situation. Anæsthetics are not required in this operation.

If, after aspiration, the pus is found to be laudable and inodorous, and if it does not accumulate very rapidly again, aspiration may be repeated; but, as a rule, more radical measures are called for. Incision should not be longer delayed, because the disease is characterized by fibrinous deposits, as well as purulent effusion, and the fibrin is liable to become decomposed and infectious. The incision should be from an inch to an inch and a half in length, and a drainage tube inserted; after which the cavity should be washed out with antiseptic fluid, and an antiseptic dressing applied. He had found local anæsthesia by cocaine to be all that was required for this operation.

Of thirteen cases in which he had performed it, three had proved fatal; one of the children dying from exhaustion, one from gastro-intestinal catarrh, and one from erysipelas. All but two of the remainder had made perfect recoveries, and the average duration of the trouble was seven weeks. He had used injections of bichloride solution (1:5000) in all his cases; and for the final injection a solution of 1 to 10,000. A good rubber tube is essential, and he is in the habit of employing the plan proposed by Baxter for preventing it from slipping into the cavity. The retraction of the chest remaining on the affected side, he had found could readily be overcome by suitable gymnastics and exercise in the open air.

DR. ROBERT ABBE then read a paper on

GENERAL CONSIDERATION OF THE SURGICAL TREATMENT OF EMPYEMA.

In the treatment of empyema, he said, it is necessary to abandon all idea of securing absorption, and the first thought should be how to rid the patient's chest of the accumulated pus most promptly. Aspiration may be repeated a number of times, and in a certain number

of simple cases it is competent to secure recovery. As a rule, it is of more service in children than in adults. It is somewhat repugnant to the surgical mind, however, to leave even a small amount of pus in such a place as the pleural cavity, and if the trouble continued for any length of time after aspiration, complete evacuation should be practised. By far the best results have thus far been obtained with free incision, followed by drainage; and experience shows that the eighth or seventh intercostal space is, as a rule, the best position for the incision. Two large drainage tubes, of the thickness of the little finger, are usually advisable.

In performing this operation, he uses a spray of carbolic solution of three per cent. strength, produced by means of a simple hand-bulb. As soon as the flow ceases on aspiration he dresses the wound with sublimate gauze and iodoform.

What we want, first and last, said Dr. Abbe, is a thorough outlet, and the purity of the wound is the other important factor. In the great majority of cases, he thought, there is no need of injecting the cavity. When there is a hectic condition, however, antiseptic injections, followed by hot water ones, should be employed; and bichloride solution (1:8000), or a weak iodine solution, might be used for the purpose. Two serious results have been observed from injections, viz., toxic symptoms from the agents employed, and sudden death due probably to either thrombosis or reflexes from the pleura.

The presence of the drainage tube occasionally causes denudation of the periosteum of a rib, which has been erroneously called necrosis. When this occurs, it is necessary to perform resection, but he considered it unjustifiable to resort to this procedure at first.

As regards anæsthetics, a few whiffs of chloroform will answer perfectly well for children, but in adults local anæsthesia with cocaine is preferable. A four per cent. solution should be injected into the tissues, and the incision not made until about fifteen minutes afterward, when the anæsthetic effect has reached its maximum intensity. When there is decomposing fibrin, resection of a piece of rib is sometimes necessary in order to secure free irrigation; and occasionally, in cases where a suppurating cavity remains after empyema, Estlander's operation of resecting several ribs proves very satisfactory. Dr. Abbe also alluded to "through drainage" and Hewitt's method of "perforation," the latter of which, he thought, can never supplant free drainage.

DR. T. H. BURCHARD had operated in eleven cases of empyema, all of which were of chronic character. The shortest duration up to the time of incision was two months, and the longest, thirteen months; the average time being six or eight months. The youngest patient was three years of age. In all the cases the operation was identical, and all were cases which had previously been aspirated either by himself or some other physician. He made a free incision from one and a half to two and a half inches in length, along the eighth rib. The amount of purulent fluid evacuated varied greatly. In one boy, of seventeen, whose case was one of the most chronic met with, there were only seven ounces, while the largest quantity evacuated was twelve quarts. This was taken from the left chest of a young man of twenty-eight, in whose case one and a half pints had

been removed three days previously by aspiration. In this instance two drainage tubes, six inches in length, were employed, and, notwithstanding the fact that they were secured with plaster to the chest-walls, they slipped into the cavity during the night. He was not permitted to go on with the case, and it was not until a year afterward that they were removed by resection of the ribs, the operation being performed by the late Dr. James L. Little.

As to the results of his cases, he has followed up seven of them for at least one year. Three entirely recovered; two developed phthisis and died, and a third, a year and a half after the operation, now had phthisis; one died of dysentery, of tubercular origin, fourteen months after the operation. In two cases he had observed in children, one of which was among his own cases and the other of which he had seen in consultation with Dr. J. Lewis Smith, hemorrhage sufficient to cause death had resulted from the operation; and it seemed to him that this accident is analogous in character to that which sometimes happens in the case of old men where too sudden and complete evacuation of the bladder is made, resulting in capillary extravasation. In these cases no artery was cut and no hemorrhage occurred from the wound, and he thought the matter is one worthy of serious consideration, especially as he has been able to find no reference to such an occurrence in medical literature.

As to the time of performing the operation, he thought it should be done early. If delayed too long, the patient is liable to die either of phthisis or tubercular disease of the bowels.

DR. H. N. HEINEMAN said that empyema in children and empyema in adults are two entirely different affections, and in the former, when it is on the left side, it is very apt to be complicated with pericarditis. Having referred to the differences in the physical signs in the two classes of cases, he said that in children especially, on account of the gurgling met with, the affection is liable to be mistaken for phthisis. The use of the hypodermatic needle is always desirable for diagnosis. As regards treatment, the indications had been very well stated by the previous speakers. If after aspiration the pus remained sweet, he thought it well to resort to this procedure a second time; after which incision should be practised. In the last ten years he has made use of only one form of incision, and that is the one known as "thorough drainage." This had been well described by Chassaignac as early as 1857, and he wondered that it had not received more attention than was the case, since it was, as a rule, followed by the best results.

DR. E. G. JANEWAY having stated that in his own practice, if one aspiration failed to produce relief, he resorted, with very few exceptions, to immediate incision, spoke of some comparatively rare conditions which had not been alluded to in the discussion. The first of these was empyema as an accompaniment of pyæmia, which was usually due to a gangrenous focus. Again, there are extreme cases in which there were double empyema and purulent endocarditis, when the result was rapidly fatal. There are other cases in which, although the fluid is septic, we are debarred from operation, and one of this kind he related. The patient suffered from pneumonic consolidation, pyo-pneumo-

thorax, and sepsis, and the fluid in the chest was very foul. Yet at the highest possible point at which an incision would have been practicable only blood could be drawn with the hypodermatic syringe. It was, therefore, necessary to leave the case to the efforts of nature, and, strange to say, the patient had made a complete and perfect recovery. In making an incision it is sometimes necessary to choose a different site from the axillary space, and in such cases we should select the spot where we can get pus. He thought it a good rule always to insert a hypodermatic needle at the point where the incision is to be made immediately before operating.

DR. A. L. LOOMIS had been accustomed to regard the pleurisies of children as very different from those of adults. Thus, acute suppurative pleurisy is very common in children; and, indeed, whenever he found that a child's chest filled rapidly he felt pretty confident that empyema was present. The treatment which he adopted in such cases was such as had been described here to-night, and he had found it very satisfactory. But acute suppurative pleurisy in adults is a very different affair. It is a dangerous affection, and often rapidly fatal. He had come to regard it as infectious, and it is usually associated with some acute pneumonia in the other lung. We have, therefore, to contend with an acute disease, which cannot be cut short by removing the products of inflammation. After the acute stage had passed, however, he believed that incision did good, and was called for.

In his opinion these cases are fibrinous pleurisies at the beginning, and after this condition has continued for about twenty-four hours the chest rapidly fills with pus. Chronic empyema is not a simple pleurisy. We have not simply the pleural cavity to deal with, but a constitutional condition, and it is necessary to seek for the cause of the pus. It is not enough to operate; but, in addition, the physician is called upon to sustain the patient's vital powers in every possible way.

DR. J. WEST ROOSEVELT took exception to the use of the carbolic spray, as advocated by Dr. Abbe, since it is confessedly inefficient in destroying germs, and he also thought that antiseptic injections are entirely useless, on the ground that no solution that can be employed can have any possible effect on the walls of the pleural cavity on account of the thick covering of fibrinous exudation with which they are coated. As to the proposed method of "inflation," he thought that if a good way of producing perforation of the lung is desired, this procedure should be adopted.

DR. CAILLE objected to the use of carbolized injections in children, on account of the danger of producing toxic constitutional effects.

DR. J. E. WINTERS said that he had careful records of ninety cases of pleurisy in children, and in only four of these was there empyema. In the latter, this condition existed when the patients were first seen, and of the remaining eighty-six cases, not a single one terminated in purulent effusion. It was also a fact that not one of these cases had been lost sight of. Owing to the results thus met with in his experience, he felt obliged to take exception to the statements made here to-night in regard to the frequency of purulent effusion in children. In the simple pleurisies commonly met with he had often seen the temperature go up to 103°

and 104°, but under the employment of rest, hot applications, and sedatives the cases almost all terminated in resolution in the course of a week or so. In no instance under his care had empyema resulted. Two cases were operated on on account of the mechanical pressure produced by the large effusion present, and while they both proved fatal, at the autopsy no pus was found in either case. He had never seen a case of empyema in a child in which there was not an abundance of serum, and he, therefore, considered that the fluid in such cases was capable of absorption. Hence the condition was very different from that existing in empyema in adults, and he should not deem it advisable to resort to surgical interference except to relieve the effects of mechanical pressure upon the viscera. Children with empyema invariably lay upon the affected side, and, therefore, in order to facilitate absorption he encouraged them to sit up in bed as much as possible. Dr. Winters decidedly objected to the use of the hypodermatic syringe or the aspirator until such procedures were absolutely necessary, as he believed that the entrance of the needle into the pleural cavity directly tended to produce pus; and Dr. Francis Delafield, he said, had expressed the same opinion to him. The termination in empyema, as he had said, is naturally very rare in children; but when it did occur, and operative procedure was called for, he was decidedly in favor of free incision in preference to aspiration.

DR. HEINMAN related a case in which there were symptoms of collapse due to hemorrhage, produced, no doubt, in the same way as in the cases mentioned by Dr. Burchard, in which the child was apparently saved by the injection of a certain amount of fluid which was allowed to remain in the cavity.

THE PRESIDENT stated that he had frequently observed severe coughing to be set up by the removal of the fluid from the pleural cavity, and that this could only be arrested by partially filling the cavity again by injection. This seemed to him to be due to the irritation caused by the sudden filling up of the bloodvessels in consequence of the bronchial dilatation resulting from the evacuation.

DR. ABBE said that in his opinion the phenomena sometimes noted after the withdrawal of the fluid were of reflex origin; and he mentioned a case in which there resulted aphonia, disorders of vision, and reflex hemiplegic symptoms.

THE PRESIDENT thought that the symptoms mentioned might probably be explained by sudden hyperæmia of the larynx, with temporary anæmia of the brain.

NEWS ITEMS.

THE CLIMATOLOGY OF ST. AUGUSTINE, FLORIDA.—DR. FRANK F. SMITH writes us as follows: Though temperature is but a factor in that product which we call climate, its study may prove of interest to many physicians who desire for their patients a mild winter climate with abundant pure air, sunshine, and opportunity for outdoor exercise, such as St. Augustine, by the sea, affords. In the table appended it will be seen that in the one hundred and eighty-one days of the six cold months, ninety days (about one-half) present a maximum temperature above 70°. Again, in this

same period, one hundred and fifty-six days show a temperature above 60°, leaving but twenty-five days in six months possibly unsuitable for the outdoor life of invalids. With such a temperature, but twelve rains in the daytime, only three fogs in the whole winter, an average cloudiness of 4.18, and softened tonic sea breezes, which no record can estimate, St. Augustine may well urge a strong claim to public attention.

ST. AUGUSTINE, FLORIDA, 1886-87.

(Records at U. S. Barracks.)

	Nov.	Dec.	Jan.	Feb.	Mar.	April.
Monthly mean	61.39	52.90	52.60	62.91	59.07	67.56
Mean at 7 o'clock A. M.	55.90	49.30	46.94	58.35	53.30	63.66
Mean at 2 o'clock P. M.	70.83	63.55	61.58	71.11	70.45	74.33
Mean at 7 o'clock P. M.	57.43	50.45	49.29	59.28	56.20	64.70
Minimum at 2 o'clock P. M.	52	45	42	52	59	57
Minimum for the month	38	31	27	39	37	40
Number of days with maximum temperature above 70°	18	6	9	19	14	24
Number of days with maximum temperature above 60°	27	25	20	26	29	29
Greatest fall of temperature from 2 P. M. till 2 P. M. following day	20	20	20	17	16	7
Average cloudiness (scale 10)	3.10	6.06	5.21	3.47	2.55	4.69
Rainy days (at night marked "n").	1 (n)	7 (3n)	5 (4n)	1 (n)	4 (2n)	6 (11n)

THE TENNESSEE STATE MEDICAL SOCIETY held its fifty-fourth annual session at Nashville last month and the following officers were elected to serve for the ensuing year:

President.—Dr. P. D. Sims, of Chattanooga.

Vice-Presidents.—Dr. T. J. Happel, of Trenton; Dr. Richard Douglas, of Nashville; and Dr. J. M. Masters, of Knoxville.

Secretary.—Dr. Ambrose Morrison, of Nashville.

Treasurer.—Dr. Richard Cheatham, of Nashville.

APPOINTMENT OF HOSPITAL PHYSICIANS IN CHICAGO.

—The Board of County Commissioners has recently removed the appointment of the attending staff of the Hospital from the domain of politics. It has voted the present staff shall remain during good behavior, and that any vacancies in its membership shall be elected by an Advisory Board of five medical men, whom it has appointed. In case of a vacancy, the staff is to nominate three persons from whom the Advisory Board is to elect one. The Advisory Board, as at present constituted, has a representative from each of three regular medical colleges.

A SURGEON REFUSED HIS FEE.—The newspapers give prominence to a dispute between Dr. Marion Sims and Nat. Goodwin, husband of the late Eliza Weathersby, the actress. Payment is refused on the old ground that "the treatment did no good." Dr. Sims was called in consultation by the attending physician, Dr. T. S. Robertson, who was in doubt as to the nature of an abdominal tumor from which his patient suffered. The result of the consultation, that an operation afforded the only hope of cure, being communicated to the patient, she earnestly requested its performance. The outcome being fatal, the husband claims that the operation did no good, and should not be paid for! Under

this extraordinary theory surgeons would soon have to abandon their work. Such actions as those indicated above are particularly unjust. Many surgeons undertake desperate operations against their own inclination and even interest, solely to give the patient an only chance. In such cases the attempt to escape the payment of the fee by claiming that "treatment did no good," furnishes an illustration of colossal meanness, beyond the power of dramatic art to exaggerate or even burlesque.—*Medical Record*, May 28, 1887.

UNAUTHORIZED USE OF PHYSICIANS' NAMES IN ADVERTISING.—The profession in Chicago is now contemplating the outrageous position into which a physician may be placed by an unscrupulous advertiser. The vender of a sulphuretted mineral water seized the opportunity of the present popularity of the rectal injections of gas for consumption, to improve his trade by a flaming advertisement of the water, with a cut of the apparatus used, and fulsome statements that the gas from this water was a sure cure, etc. From reports of a meeting of the Medical Society, he learned the names of a number of physicians who were using the measure, and embodied their names in the advertisement in such a way as to make it appear that they endorsed in full the statements it contained. The performance has been denounced in a card by all the physicians whose names were used, but this only slightly counteracts the effect of the outcry. It is interesting, anent this subject, to note how generally the profession here is now reaching the conclusion—the only one that ever ought to, or could logically have been formed—that the most desirable, as the only definite and exact way to secure the sulphuretted hydrogen for this kind of medication is through the well-known artificial compound with the sulphide of sodium, and not by means of any natural water.—*Boston Medical and Surgical Journal*, May 26, 1887.

PROFESSOR SEMMOLA has succeeded in founding a Chair of Clinical Therapeutics in the University of Naples, to which he has been called.

THE BERLIN MEDICAL SOCIETY AT THE CONGRESS.

—A press cablegram, dated Berlin, May 27, states that a committee of the Berlin Medical Society has considered the suggestion made in certain American quarters that the Society be officially represented at the Medical Congress to be held at Washington. Professor Virchow states that the Committee has decided against the suggestion.

DEFENCE OF PROFESSIONAL INTERESTS BY FRENCH LAW.

—*The British Medical Journal* of May 14, 1887, reports the following: A case was recently decided in France, the result of which shows how much keener an appreciation law takes of professional interests in France than in our own country. A journal, the *Echo de l'Est*, had thought fit to announce to its readers that Dr. Bernard, of Thiancourt, had just performed a surgical operation, in consequence of which the patient had succumbed. Dr. Bernard immediately brought an action against the journal for libel, inasmuch as it was inferred that the death of the patient was attributable to the operation. The Court of First Instance of Bar-le-Duc, looking at the matter as one of public interest, author-

ized the incriminated journal to substantiate the allegation. On appeal, however, the court at Nancy quashed the decision of the other court, and declined to allow the journal to plead, declaring the allegations to be groundless; adding, moreover, that, "inasmuch as they were based on a fact of an essentially private nature, altogether outside public discussion, and quite independent of journalistic criticism," the journal was not warranted in making any such statement, and was condemned to pay 10,000 francs damages to the practitioner whose reputation had been assailed. It is quite refreshing, in these degenerate days, to see that, in one country, at any rate, the reputation of a medical man is recognized as having an appreciable value. The interesting feature of the case, however, lies in the decision of the tribunal that such cases are beyond the competence of a newspaper to criticise, and are, in any event, of an essentially private nature. It would be a great boon if such a sentiment could be imported into this country. A few decisions like this would doubtless have a salutary effect in checking the by no means disinterested curiosity of scandal-mongers, who appear to consider themselves competent and at liberty to comment upon both the malady and the treatment, to the annoyance of the patient and the discomfort, and even damage, of the medical attendant.

THE CLIMATE OF COLORADO SPRINGS FOR THE PHTHISICAL.—A gentleman who had tried the favorite resorts of Europe and America, describes the advantages of Colorado Springs as follows in the *New York Tribune* of May 22, 1887:

No climate is absolutely perfect, so I shall first call attention to the only blemish in the climate of Colorado Springs. We have some wind and, at times severe wind, yet the number of days when an invalid is compelled to remain indoors on account of strong wind is not more than the number he is compelled to spend indoors at Davos, in Switzerland, on account of the falling of snow. Furthermore, if an invalid finds the wind objectionable he can readily escape it by changing to Manitou Springs (ten minutes by rail), which is even more sheltered than Davos.

Now as to the advantages of Colorado Springs:

1. Its altitude is six thousand feet above sea level. To the north the land rises gradually, thickly wooded, to the height of 7500 feet. Six miles to the west runs a spur of the Rocky Mountains culminating in Pike's Peak, 14,200 feet high. Thus the city is sheltered to the north and west and is open to the south and east.

2. The sunshine is almost uninterrupted. During the winter there is no rain, no cloudy or foggy weather, and hardly any snow. Snow falls very rarely, and when it falls it disappears quickly and almost miraculously, leaving neither mud nor dampness behind.

3. As the city lies open to the east and the higher mountains to the west are at some distance, the daily duration of winter sunshine is very great—fully forty per cent. greater than at Davos.

4. The character of the soil is porous. This is a very important advantage. If rain or snow falls at Denver, for example, the result is mud, and mud means continued dampness. There is no mud at Colorado Springs.

5. The invalid is not restricted to hotel life. Boarding-houses and furnished houses abound. Housekeeping,

owing to the presence of a large number of very superior stores, is made easy. Should the invalid prefer hotel life, he will find the hotels first-class, but be it said that no American hotels are so carefully managed as to comfort nor so particular as to ventilation as are the hotels of the Riviera or of Davos.

6. There is nothing of the hospital character about Colorado Springs. Of its 7000 inhabitants, many never were sick, and many who once were are now perfectly cured. The invalids are scattered to such an extent, there are so many amusements and points of interest to disperse them, that one never feels the depressing influence of being in a great consumptive hospital.

7. Amusements are very plentiful. There are few cities in the world that offer such a variety of beautiful rides and drives. Invalids are out riding or driving nearly every day in the year. Many people of wealth and culture reside here, society is pleasant and clubs of all kinds abound—social clubs, reading clubs, musical clubs, fox-hunting clubs, etc. An invalid here has neither time nor disposition to mope.

8. One of the objections I found to Davos and the Riviera was that when spring came the patient was chafing to get away. I do not find this at Colorado Springs. Nor is it necessary. The summer climate is just as healthful and just as exceptional as the winter climate. In fact, the reputation of Colorado summers brings thousands of tourists here every summer. The days are warm, not uncomfortably so, and the nights are always cool enough to make a heavy blanket necessary. Some invalids go up into the beautiful near-by mountain parks (8500 to 10,000 feet high), and live at a farm house or camp out. Some change to Manitou Springs and enjoy witnessing the summer gayety. The majority remain here and are equally benefited.

9. If a patient feels disposed to make a change during the winter, he has a large choice of places which he can visit with safety. He may go to Denver or to any of the towns between Colorado Springs and Pancha Springs inclusive. This belt of territory is all favored with an exceptional climate. On the other hand, if an invalid finds that the climate does not agree with him, he can travel hence to Southern California quickly and comfortably.

COMPLAINT REGARDING THE CONDITION OF THE VIENNA HOSPITAL.—In a recent session of the Austrian Parliament a complaint was made regarding the condition and administration of the Vienna General Hospital. The charge was answered in a general way, and is now undergoing investigation.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING MAY 28, 1887.

DEANE, C. W., *Passed Assistant Surgeon*.—Detached from the "Dale" and ordered to hospital, Mare Island.

HARVEY, H. P., *Surgeon*.—Orders to "Iroquois" revoked, and wait orders.

DIXON, S. H., *Passed Assistant Surgeon*.—Detached from Navy Yard, Washington, D. C., and ordered to the "Dale."

WAGGENER, J. R., *Surgeon*.—Detached from the "Iroquois" and wait orders.

WHITE, S. STUART, *Assistant Surgeon*.—Ordered to Receiving Ship "St. Louis," Navy Yard, League Island.

FIELD, DR. JAMES G., of Gordonsville, Va., commissioned Assistant Surgeon in the Navy, May 23, 1887.